

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Ganapathy Krishnan Examiner #: 79271 Date: 1/30/03
 Art Unit: 1623 Phone Number 305-4837 Serial Number: 101030974
 Mail Box and Bldg/Room Location: 8D08 Results Format Preferred (circle): PAPER DISK E-MAIL
8B19

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet; pertinent claims, and abstract.

Title of Invention: Preparations containing no cross-linking reagents.

Inventors (please provide full names): Andrea Heilemann, Josef Holzer, Andreas Sander, Gisbert Schaefer

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for:

1. A process for preparing a composition containing chitosan without cross-linkers (claims 19 and 31).
 claims 20-30 and 32-38 have limitations.

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jan.delaval@uspto.gov

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Type of Search

Vendors and cost where applicable

Searcher: Jm

NA Sequence (#)

STN

Searcher Phone #: 4498

AA Sequence (#)

Dialog

Searcher Location: 213/03

Structure (#)

Questel/Orbit

Date Searcher Picked Up: 2/13/03

Bibliographic

Dr. Link

Date Completed: 2/13/03

Litigation

Lexis/Nexis

Searcher Prep & Review Time: 6.0

Fulltext

Sequence Systems

Clerical Prep Time: 6.0

Patent Family

WWW/Internet

Online Time: +120

Other

Other (specify)

=> fil hcaplus

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FILE COVERS 1907 - 3 Feb 2003 VOL 138 ISS 6
 FILE LAST UPDATED: 2 Feb 2003 (20030202/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L79 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 2001:668185 HCAPLUS
 DN 135:231485
 TI Cosmetic compositions containing styling polymers, hair-care method, and use of the compositions
 IN Belli, Emmanuelle; Sheldon, Elvet; Pasquet, Dorothee
 PA L'oreal S. A., Fr.
 SO Jpn. Kokai Tokkyo Koho, 17 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM A61K007-06
 ICS C08K003-00; C08L003-00; C08L005-00; C08L033-02; C08L101-02
 CC 62-3 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001247434	A2	20010911	JP 2001-62335	20010306
	FR 2805990	A1	20010914	FR 2000-2907	20000307
	CN 1314137	A	20010926	CN 2001-116230	20010228
	EP 1132076	A1	20010912	EP 2001-400554	20010302

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

CA 2337289	AA	20010907	CA 2001-2337289	20010305
BR 2001000968	A	20011030	BR 2001-968	20010306
US 2001055580	A1	20011227	US 2001-799911	20010307
US 20020176836	A9	20021128		

PRAI FR 2000-2907 A 20000307

AB The compns., which are applied to skin, nail, lips, hair, eyebrows, and eyelashes, not sticky to fingers and esp. useful as styling agents for dried hair, contain (a) thickeners selected from xanthan gum, scleroglucan gum, gellan gum, rhamsan gum, alginate, maltodextrin, starch, starch derivs., Indian gum, carob bean powder, guar gum, guar gum derivs., crosslinked copolymers of acrylic acid and/or methacrylic acid, crosslinked thickening polyacrylamide, and assocg. polymers having .gtoreq.1 hydrophilic unit and .gtoreq.1 fatty chain, (b) noncrosslinked setting polymers, and (c) insol. nonlayered compd.

powder. A hair styling gel was prep'd. from Carbopol Ultrez 10 [crosslinked poly(acrylic acid)] 0.4, Viscophobe DB 1000 1.5, vinyl acetate-vinylpyrrolidone copolymer 3, Belsil DMC 6038 (dimethicone copolyol) 0.5, kaolin 1, EtOH 17.2, aminomethylpropanol, and H2O to 100 parts. The gel was not sticky to fingers and fixed hair style without harming the natural appearance.

ST hair styling compn thickener setting polymer powder

IT Polyurethanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (block; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Kaolin, biological studies
 Soaps
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyoxyalkylenes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (di-Me, Me hydrogen polysiloxane-, Mirasil; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (di-Me, Me hydrogen, polyoxyalkylene-, Mirasil; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Microspheres
 (expanded; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyurethanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (insol.; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (microbeads; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (polyether-, Belsil DMC 6038; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyamines
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (polyoxazolines; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polysiloxanes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (polyoxyalkylene-; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyoxyalkylenes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (polysiloxane-; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Ceratonia siliqua
 (powder; cosmetic compns. contg. thickeners, setting polymer, and

IT powdery compds.)

Polyamides, biological studies

Polyesters, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(powder; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Polyethers, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(siloxane-, Belsil DMC 6038; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT Bone morphogenetic protein receptors

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(type II; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 53633-54-8, Polyquaternium 11

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(Gafquat; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 84563-77-9, Chitosan glycolate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(Kytamer; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

IT 75-21-8D, Oxirane, polymers with di-Me siloxanes, biological studies

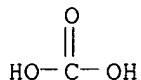
75-56-9D, Methyloxirane, polymers with di-Me siloxanes 79-10-7D, Acrylic acid, alkyl esters, homopolymers 79-41-4D, Methacrylic acid, alkyl esters, homopolymers 88-12-0D, polymers with dialkylaminoalkyl (meth)acrylates 108-05-4D, Vinyl acetate, polymers with acrylic esters or maleate esters 471-34-1, Calcium carbonate, biological studies 546-93-0, Magnesium carbonate 1306-06-5, Hydroxyapatite 1306-38-3, Ceria, biological studies 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconia, biological studies 1344-28-1, Alumina, biological studies 2090-64-4 9000-28-6, Gum ghatti 9000-30-0, Guar gum 9002-88-4, Acumist B6 9003-20-7, Poly(vinyl acetate) 9003-39-8, PVP 9004-34-6D, Cellulose, cationic, biological studies 9004-64-2, Klucel EF 9005-00-9, Brij 78 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9006-26-2, Ethylene-maleic anhydride copolymer 9012-76-4, Chitosan 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum 13463-67-7, Titania, biological studies 24937-16-4, Orgasol 2002 24937-78-8, Ethylene-vinyl acetate copolymer 25038-74-8 25085-35-2, Acrylic acid-ethyl acrylate copolymer 26006-22-4 26100-47-0, Acrylamide-ammonium acrylate copolymer 27119-07-9, 2-Acrylamido-2-methylpropanesulfonic acid homopolymer 29297-55-0D, Vinylimidazole-vinylpyrrolidone copolymer, quaternized 30581-59-0, Copolymer 845 35429-19-7, Acrylamide-methacryloyloxyethyltrimethylammonium chloride copolymer 37311-01-6, Procetyl AWS 39421-75-5, Jaguar HP 105 39464-87-4, Scleroglucan 40623-73-2, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid copolymer 71010-52-1, Gellan gum 76050-42-5, SynthalenK 96949-21-2, Rhamsan gum 102972-64-5, Dimethylaminoethyl methacrylate-vinylcaprolactam-vinylpyrrolidone copolymer 117522-93-7, Kytamer PC 132230-28-5D, quaternized 145686-74-4, Laurylmethicone copolyol 194674-18-5, Simulsol 165 195739-91-4, Carbopol Ultrez 10 330627-33-3, Viscophobe DB 1000 359715-28-9, MSX 4562

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)

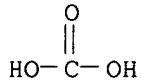
IT 9010-76-8, ExpanceL 551DE

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (microballoons; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)
 IT 9003-53-6, Polystyrene 24937-14-2, Poly(.beta.-alanine) 25513-34-2,
 Poly(.beta.-alanine)
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (powder; cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)
 IT 471-34-1, Calcium carbonate, biological studies 546-93-0
 , Magnesium carbonate 1306-06-5, Hydroxyapatite
 9012-76-4, Chitosan
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic compns. contg. thickeners, setting polymer, and powdery compds.)
 RN 471-34-1 HCAPLUS
 CN Carbonic acid calcium salt (1:1) (8CI, 9CI) (CA INDEX NAME)



Ca

RN 546-93-0 HCAPLUS
 CN Carbonic acid, magnesium salt (1:1) (8CI, 9CI) (CA INDEX NAME)



Mg

RN 1306-06-5 HCAPLUS
 CN Hydroxylapatite (Ca₅(OH)(PO₄)₃) (9CI) (CA INDEX NAME)

Component	Ratio	Component
		Registry Number
HO	1	14280-30-9
O ₄ P	3	14265-44-2
Ca	5	7440-70-2

RN 9012-76-4 HCAPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 2001:50727 HCAPLUS
 DN 134:102471
 TI Chitosan preparations free from crosslinking agents

IN Schafer, Gisbert; Holzer, Josef; Sander,
 Andreas; Heilemann, Andrea
 PA Cognis Deutschland G.m.b.H., Germany
 SO PCT Int. Appl., 28 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C08L005-08
 ICS C08B037-08; A61K007-00; A61K047-36; A61K031-722; A23L001-056;
 A61L015-28
 CC 44-5 (Industrial Carbohydrates)
 Section cross-reference(s): 17, 62, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004207	A1	20010118	WO 2000-EP6162	20000701
	W: JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19932075	A1	20010118	DE 1999-19932075	19990712
	EP 1198508	A1	20020424	EP 2000-943964	20000701
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				

PRAI DE 1999-19932075 A 19990712
 WO 2000-EP6162 W 20000701

AB The title preps., useful in food, cosmetics, and pharmaceuticals (no data), are prepd. by treating aq. solns. or homogeneous suspensions of chitosan with precipitants and dewatering. A colloidal suspension of chitosan (Hydagen CMFP) 2, H₂O 98, and L-lactic acid 0.346 g was mixed (9 kg) at 10.degree. with 360 g 8.05% NaHCO₃ for 2 min, poured into molds, left for 3 h, frozen, and freeze -dried at 80.degree./1 mbar to give blocks which were cut to desired dimensions (e.g., 200 .times. 300 .times. 1.5 mm).

ST chitosan prep crosslinker free; food
 chitosan prep; cosmetic chitosan prep; pharmaceutical
 chitosan prep; precipitant chitosan prep;
 sodium bicarbonate precipitant chitosan

IT Cosmetics
 (chitosan preps. free from crosslinking
 agents for use in cosmetics)

IT Food
 (chitosan preps. free from crosslinking
 agents for use in food)

IT Drugs
 (chitosan preps. free from crosslinking
 agents for use in pharmaceuticals)

IT Phosphates, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (hydrogen; precipitants for chitosan preps.
 free from crosslinking agents)

IT Bases, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (org.-N; precipitants for chitosan preps.
 free from crosslinking agents)

IT Alkali metal hydroxides
 Alkaline earth hydroxides
 Carbonates, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (precipitants for chitosan preps. free from
 crosslinking agents)

IT 9012-76-4, Chitosan
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chitosan preps. free from crosslinking

WPO Assistant

agents)

IT 144-55-8, Sodium bicarbonate, processes
 7664-41-7, Ammonia, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (precipitants for chitosan preps. free from
 crosslinking agents)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Higeta Shoyu Kk; JP 63017901 A 1988 HCPLUS
 (2) Kawamura; US 4833237 A 1989 HCPLUS
 (3) Nippon Suisan Kaisha Ltd; JP 01062302 A 1989 HCPLUS
 (4) Nippon Suisan Kaisha Ltd; JP 01062302 A 1989 HCPLUS
 (5) Nippon Suisan Kaisha Ltd; PATENT ABSTRACTS OF JAPAN 1989, V013(260), PC-607
 (6) Unikita Ltd; JP 63090507 A 1988 HCPLUS

IT 9012-76-4, Chitosan
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chitosan preps. free from crosslinking
 agents)

RN 9012-76-4 HCPLUS

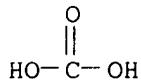
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 144-55-8, Sodium bicarbonate, processes
 7664-41-7, Ammonia, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (precipitants for chitosan preps. free from
 crosslinking agents)

RN 144-55-8 HCPLUS

CN Carbonic acid monosodium salt (8CI, 9CI) (CA INDEX NAME)



Na

RN 7664-41-7 HCPLUS
 CN Ammonia (8CI, 9CI) (CA INDEX NAME)

NH₃

L79 ANSWER 3 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 2000:900474 HCPLUS
 DN 134:46867
 TI Hemoactive compositions and methods for their manufacture and use
 IN Reich, Cary J.; Osawa, A. Edward; Tran, Helen
 PA Fusion Medical Technologies, Inc., USA
 SO PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K038-00
 ICS A61K038-17; A61K035-14; A61K031-74; A61K009-00; A01N043-04;
 C07K001-00
 CC 63-8 (Pharmaceuticals)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000076533	A1	20001221	WO 2000-US15998	20000609 <--
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 2002042378	A1	20020411	US 1999-330315	19990610 <--
	EP 1185288	A1	20020313	EP 2000-942742	20000609 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2003501215	T2	20030114	JP 2001-502866	20000609 <--
PRAI	US 1999-330315	A	19990610 <--		
	WO 2000-US15998	W	20000609 <--		
AB	<p>Dried hemoactive materials comprise both a crosslinked biol. compatible polymer and a non-crosslinked biol. compatible polymer. The crosslinked polymer is selected to form a hydrogel when exposed to blood. The non-crosslinked polymer is chosen to solubilize relatively rapidly when exposed to blood. The non-crosslinked polymer serves as a binder for holding the materials in desired geometries, such as sheets, pellets, plugs, or the like. Usually, the crosslinked polymer will be present in a particulate or fragmented form. The materials are particularly suitable for hemostasis and drug delivery. Examples are given for prodn. of uncrosslinked gelatin powder, prodn. of lyophilized composite mixt. of crosslinked and uncrosslinked biopolymer in sheet form, and used of lyophilized composite material as a hemostatic.</p>				
ST	hemostatic crosslinked biopolymer; gelatin hemoactive				
IT	<p>Anesthetics Angiogenesis inhibitors Anti-inflammatory agents Antibacterial agents Antibiotics Antitumor agents Antiviral agents Crosslinking Hemostatics Plasticizers Wound healing promoters (hemoactive compns.)</p>				
IT	<p>Acrylic polymers, biological studies Caseins, biological studies Collagens, biological studies Elastins Fibrinogens Fibrins Fibronectins Gelatins, biological studies Glycosaminoglycans, biological studies Hemoglobins Keratins Laminins Polyesters, biological studies Polyoxyalkylenes, biological studies RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (hemoactive compns.)</p>				
IT	<p>Enzymes, biological studies Hormones, animal, biological studies Neurotransmitters Polysaccharides, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hemoactive compns.)</p>				

IT Vinyl compounds, biological studies
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (polymers; hemoactive compns.)

IT Albumins, biological studies
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (serum; hemoactive compns.)

IT 25322-68-3, Peg
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (hemoactive compns.)

IT 50-70-4, Sorbitol, biological studies 56-81-5, Glycerol, biological studies 9003-05-8, Polyacrylamide 9004-34-6, Cellulose, biological studies 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid 9012-36-6, Agarose 9012-76-4, Chitosan 9014-63-5, Xylan 9034-32-6, Hemicellulose 24980-41-4, Polycaprolactone 25248-42-4, Polycaprolactone 26780-50-7, Glycolide-lactide copolymer
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hemoactive compns.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Chu; US 5428024 A 1995 HCPLUS
- (2) Fusion Medical Technologies Inc; WO 9808550 A1 1998 HCPLUS
- (3) Wallace; US 6066325 A 2000 HCPLUS

IT 9012-76-4, Chitosan

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hemoactive compns.)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 4 OF 17 HCPLUS COPYRIGHT 2003 ACS

AN 2000:814525 HCPLUS

DN 133:363926

TI Collagen-free compositions for cosmetics

IN Wachter, Rolf; Griesbach, Ute; Horlacher, Peter

PA Cognis Deutschland G.m.b.H., Germany

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM C08B037-00

ICS C08L005-08; A61K007-48

CC 44-5 (Industrial Carbohydrates)

Section cross-reference(s): 62

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000068273	A1	20001116	WO 2000-EP3762	20000426 <--
	W: AU, CA, CN, JP, KR, NZ, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19920557	A1	20001116	DE 1999-19920557	19990505 <--
	EP 1173488	A1	20020123	EP 2000-927067	20000426 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002544140	T2	20021224	JP 2000-616245	20000426 <--
PRAI	DE 1999-19920557	A	19990505	<--	
	WO 2000-EP3762	W	20000426	<--	
OS	MARPAT	133:363926			
AB	The invention relates to collagen-free cosmetic prepns. which				

can be obtained by **crosslinking** and subsequently dewatering swollen aq. suspensions of **chitosans** and .beta.-1,3-glucans with diisocyanates and/or dialdehydes. In examples, compns. of **chitosan** (Hydagen CMFP), Highcareen GS, and glycerol were **crosslinked** with hexamethylene diisocyanate to give a spongy material after **freeze drying**.

ST chitosan isocyanate glucan glycerol polymer cosmetic

IT Cosmetics

(chitosan-based collagen-free compns. for)

IT Drying

(dewatering; of chitosan-based collagen-free compns. for cosmetics)

IT Freeze drying

(of chitosan-based collagen-free compns. for cosmetics)

IT 306975-95-1P, Glycerol-hexamethylene diisocyanate-Highcareen GS-Hydagen CMFP copolymer
 RL: BSU (Biological study, unclassified); IMF (Industrial manufacture);
 BIOL (Biological study); PREP (Preparation)
 (in collagen-free compns. for cosmetics)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; PATENT ABSTRACTS OF JAPAN 1989, V013(262), PC-608
- (2) Anon; PATENT ABSTRACTS OF JAPAN 1993, V017(067), PC-1025
- (3) Anon; PATENT ABSTRACTS OF JAPAN 1994, V018(282), PC-1205
- (4) Fuji Boseki Kk; JP 01066204 A 1989 HCPLUS
- (5) Henkel Kgaa; DE 19643066 A 1998 HCPLUS
- (6) Lee, C; US 5420197 A 1995 HCPLUS
- (7) Momoki, N; JP 06048917 A 1994
- (8) Nitta Gelatin Inc; JP 04275207 A 1992 HCPLUS
- (9) Smith, T; US 5322935 A 1994 HCPLUS

L79 ANSWER 5 OF 17 HCPLUS COPYRIGHT 2003 ACS

AN 2000:450025 HCPLUS

DN 133:366262

TI Antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate

AU Ikinci, G.; Senel, S.; Kas, S.; Yousefi-Rad, A.; Hincal, A. A.

CS Department of Pharmaceutical Technology, University of Hacettepe, Ankara, Turk.

SO Advances in Chitin Science (2000), 4(EUCHIS'99), 287-290

CODEN: ACSCFF

PB Universitaet Potsdam, Universitaetsbibliothek

DT Journal

LA English

CC 63-5 (Pharmaceuticals)

AB **Free** and **crosslinked chitosan** films were prep'd. by solvent casting method. Chlorhexidine gluconate (Chx) which is an effective therapeutic agent for oral candidiasis was chosen as the candidate drug. The films were characterized by detn. of water absorption capacity, drug release and antifungal activity. Water absorption capacity and the release of drug from the films decreased with increasing crosslinking agent, tripolyphosphate concn. The release of Chx from **chitosan** films was maintained for 4h reaching a plateau after 1.5h without a lag-time. The antifungal activity of Chx incorporated into **chitosan** film was found to be more pronounced when compared to that of Chx itself.

ST antifungal chlorhexidine release **chitosan** film

IT Crosslinking agents

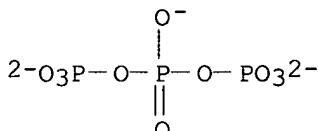
Dissolution rate

Fungicides

(antifungal activity and release behavior of **crosslinked chitosan** films incorporated with chlorhexidine gluconate)

IT Drug delivery systems

(films; antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 IT 18472-51-0, Chlorhexidine gluconate
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 IT 14127-68-5, Tripolyphosphate
 RL: CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 IT 9012-76-4, Chitosan
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
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 (2) Ferretti, G; J Am Dent Assoc 1987, V114, P461
 (3) Knapczyk, J; Int J Pharm 1992, V80, P33 HCPLUS
 (4) Needdleman, I; J Clin Periodontol 1998, V25, P74
 (5) Senel, S; Proceed Int Symp Control Rel Bioact Mater 1998, V25, P790
 IT 14127-68-5, Tripolyphosphate
 RL: CAT (Catalyst use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 RN 14127-68-5 HCPLUS
 CN Triphosphate (8CI, 9CI) (CA INDEX NAME)



IT 9012-76-4, Chitosan
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antifungal activity and release behavior of crosslinked chitosan films incorporated with chlorhexidine gluconate)
 RN 9012-76-4 HCPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 6 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 1999:620323 HCPLUS
 DN 132:6307
 TI Chitosan microspheres prepared by spray drying
 AU He, P.; Davis, S. S.; Illum, L.
 CS Department of Pharmaceutical Sciences, University of Nottingham, University Park, Nottingham, UK
 SO International Journal of Pharmaceutics (1999), 187(1), 53-65
 CODEN: IJPHDE; ISSN: 0378-5173
 PB Elsevier Science B.V.
 DT Journal
 LA English

CC 63-6 (Pharmaceuticals)

AB Non-crosslinked and crosslinked

chitosan microspheres were prep'd. by a spray drying method. The microspheres so prep'd. had a good sphericity and a smooth but distorted surface morphol. They were pos. charged. The particle size ranged from 2 to 10 .mu.m. The size and zeta potential of the particles were influenced by the crosslinking level. With decreasing amt. of crosslinking agent (either glutaraldehyde or formaldehyde), both particle size and zeta potential were increased. Prepn. conditions also had some influence on the particle size. DSC studies revealed that cimetidine, as well as famotidine was molecularly dispersed inside the microspheres, in the form of a solid soln. The release of model drugs (cimetidine, famotidine and nizatidine) from these microspheres was fast, and accompanied by a burst effect.

ST chitosan microsphere spray drying

IT Antihistamines

(H2; chitosan microspheres prep'd. by spray drying)

IT Crosslinking

Dissolution rate

Particle size distribution

Zeta potential

(chitosan microspheres prep'd. by spray drying)

IT Drug delivery systems

(microspheres; chitosan microspheres prep'd. by spray drying)

IT Drying

(spray; chitosan microspheres prep'd. by spray drying
)

IT 50-00-0, Formaldehyde, processes 111-30-8, Glutaraldehyde

RL: PEP (Physical, engineering or chemical process); PROC (Process)
(chitosan microspheres prep'd. by spray drying)

IT 9012-76-4, Chitosan 51481-61-9, Cimetidine

76824-35-6, Famotidine 76963-41-2, Nizatidine

RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(chitosan microspheres prep'd. by spray drying)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Acikgoz, M; J Microencapsulation 1996, V13, P141 MEDLINE
- (2) Akbuga, J; Int J Pharm 1994, V111, P217 HCPLUS
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- (21) Pavenetto, F; J Microencapsulation 1993, V10, P487
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- (25) Wagenaar, B; Biomaterials 1994, V15, P49 HCPLUS

(26) Wozniak, T; Analytical Profiles of Drug Substances 1990, V19, P397 HCAPLUS
 IT 9012-76-4, Chitosan
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (chitosan microspheres prep. by spray drying)
 RN 9012-76-4 HCAPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 1999:440742 HCAPLUS
 DN 131:215588
 TI Preparing chito-oligosaccharides as antimicrobial agents for cotton
 AU Seong, Ha-Soo; Kim, Jae-Pil; Ko, Sohk-Won
 CS Department of Fiber and Polymer Science, Seoul National University, Seoul,
 S. Korea
 SO Textile Research Journal (1999), 69(7), 483-488 ←
 CODEN: TRJOA9; ISSN: 0040-5175
 PB Textile Research Institute
 DT Journal
 LA English
 CC 40-9 (Textiles and Fibers)
 Section cross-reference(s): 44
 AB Cotton fabric with good antimicrobial activity and durability to washing
 is obtained by using chito-oligosaccharides without the need for
 a binding chem. as a crosslinker. The fully deacetylated
 chitosan is depolymd. into chito-oligosaccharide using sodium
 nitrite. The av. d.p. (DP) of chito-oligosaccharide is detd. by
 colorimetric titrn. of a terminal aldehyde group of chito-oligosaccharide.
 In a pad-dry-cure process, two different chito-oligosaccharides
 (DP = 3 and 10) are applied to cotton fabric using the chem. reactivity of
 the terminal aldehyde group. The antimicrobial activity and durability to
 washing of the treated cotton are evaluated. The results show that at the
 fiftieth wash cycle, the cotton fabrics treated with 2.4%
 chito-oligosaccharide are able to maintain 95% (for a DP of 3) and 100%
 (for a DP of 10) bacterial redns.
 ST chitosan oligosaccharide cotton fabric antimicrobial agent
 IT Textiles
 (cotton; prepn. of chito-oligosaccharides as antimicrobial agents for
 cotton fabrics)
 IT Antimicrobial agents
 Depolymerization
 (prepn. of chito-oligosaccharides as antimicrobial agents for cotton
 fabrics)
 IT 9012-76-4, Chitosan
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (depolymd.; prepn. of chito-oligosaccharides as antimicrobial agents
 for cotton fabrics)
 IT 7632-00-0, Sodium nitrite
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of chito-oligosaccharides as antimicrobial agents for cotton
 fabrics)
 RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
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 (2) Anon; JP 3-51369 1991 HCAPLUS
 (3) Hirano, S; Chitin in Nature and Technology 1986, P299
 (4) Kifune, K; Advances in Chitin and Chitosan 1992, P9
 (5) Mima, S; J Appl Polym Sci 1983, V28, P1909 HCAPLUS
 (6) Sandford, P; Water-Soluble Polymers 1991, P430 HCAPLUS
 (7) Sannan, T; Macromol Chem 1976, V177, P3589 HCAPLUS

(8) Seo, H; Advances in Chitin and Chitosan 1992, P34 HCPLUS
 (9) Tsuji, A; Chem Pharm Bull 1969, V17(7), P1505 HCPLUS
 (10) Tsuji, A; Chem Pharm Bull 1969, V17(1), P217 HCPLUS
 (11) Vigo, T; Handbook of Fiber Science and Technology: Vol II Chemical Processing of Fibers and Fibrics Functional Finishes Part A 1983, P367

IT 9012-76-4, Chitosan
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (depolymd.; prepn. of chito-oligosaccharides as antimicrobial agents for cotton fabrics)

RN 9012-76-4 HCPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 8 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 1999:125735 HCPLUS
 DN 130:187225
 TI Chitosan matrixes for encapsulated cells for implantation
 IN Aebischer, Patrick; Zielinski, Beth A.
 PA Brown University Research Foundation, USA
 SO U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 176,323, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C12N011-10
 ICS C12N011-04; C12N005-00
 NCL 435178000
 CC 63-7 (Pharmaceuticals)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5871985	A	19990216	US 1994-294149	19940822 <--
	US 6140089	A	20001031	US 1999-251004	19990216 <--
PRAI	US 1992-952249	B1	19920928 <--		
	US 1994-176323	B2	19940103 <--		
	US 1994-294149	A3	19940822 <--		
AB	Vehicles contg. cells for implanting in the tissue of an individual are prep'd. having cells dispersed in a particulate, essentially non cross-linked chitosan core matrix that is enclosed within a semipermeable membrane. The cells are entrapped between chitosan particles of the core matrix and there is essentially no interfacial crosslinking between the core matrix and the membrane. The core matrix provides a phys. support for viable cells within the vehicle such that the cells are evenly dispersed throughout the core matrix so as to allow their maintenance, growth, proliferation and differentiation. The vehicle can be prep'd. by mixing viable cells with a soln. of chitosan, encapsulating the resultant mixt. in a semipermeable membrane and causing the chitosan to ppt. such as by changing the pH to form the core matrix. Alternatively, the chitosan is pptd. to form the core matrix contg. cells and then the core matrix is encapsulated in a semipermeable membrane. Cells within the core matrix may be neurosecretory cell lines, .beta.-cell-derived cells lines, fibroblasts, myocytes and glial cells.				
ST	pharmaceutical implant chitosan matrix animal cell				
IT	Animal cell line (NIT; chitosan matrixes for encapsulated cells for implantation)				
IT	Animal cell line (PC12; chitosan matrixes for encapsulated cells for implantation)				
IT	Animal cell line (RIN; chitosan matrixes for encapsulated cells for				

implantation)

IT Astrocyte

Fibroblast

Neuroglia

(chitosan matrixes for encapsulated cells for implantation)

IT Muscle

(fiber; chitosan matrixes for encapsulated cells for implantation)

IT Drug delivery systems

(implants; chitosan matrixes for encapsulated cells for implantation)

IT Animal cell line

(.beta.-cell-derived; chitosan matrixes for encapsulated cells for implantation)

IT 9012-76-4, Chitosan

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chitosan matrixes for encapsulated cells for implantation)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (3) Anon; WO 8702703 1987 HCPLUS
- (4) Anon; EP 3318286 A 1988
- (5) Cardinal; US 4895724 1990 HCPLUS
- (6) Daly; US 4808707 1989 HCPLUS
- (7) Jarvis; US 4495288 1985 HCPLUS
- (8) Jarvis; US 4803168 1989
- (9) Malette; US 4605623 1986 HCPLUS
- (10) Masri; US 4167447 1979 HCPLUS
- (11) Moo-Young; US 5116747 1992 HCPLUS
- (12) Mosbach; US 4647536 1987 HCPLUS
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- (14) Rah; US 4749620 1988 HCPLUS
- (15) Rha; US 4744933 1988 HCPLUS
- (16) Schroder; US 4713249 1987 HCPLUS
- (17) Walthall; US 4902295 1990

IT 9012-76-4, Chitosan

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chitosan matrixes for encapsulated cells for implantation)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 9 OF 17 HCPLUS COPYRIGHT 2003 ACS

AN 1998:655488 HCPLUS

DN 130:100545

TI Investigation of a pMDI system containing chitosan microspheres and P134a

AU Williams, Robert O., III; Barron, Melisa K.; Jose Alonso, Maria; Remunan-Lopez, Carmen

CS Pharmaceutics Division, College of Pharmacy, The University of Texas at Austin, Austin, TX, 78712-1074, USA

SO International Journal of Pharmaceutics (1998), 174(1-2), 209-222

CODEN: IJPHDE; ISSN: 0378-5173

PB Elsevier Science B.V.

DT Journal

LA English

CC 63-6 (Pharmaceutics)

AB Microspheres made of chitosan, a biodegradable polymer, were investigated as a potential carrier for therapeutic proteins, peptides and plasmid DNA for administration to the lung from a pressurized metered dose inhaler (pMDI). Through the use of different crosslinking

agents and additives, the physicochem. properties of **chitosan**. microspheres were modified to improve compatibility in a pMDI delivery system. Their d., thermal properties, surface hydrophobicity, surface charge and free amino group content were detd. before and after formulation in a pMDI system utilizing P134a. Also, the in vitro delivery characteristics of the pMDI systems were ascertained by cascade impaction. The densities of the non cross-linked and the glutaraldehyde cross-linked **chitosan** microspheres closely matched that of liq. P134a. An increase in the median particle size and the polydispersity after exposure to P134a was found for all types of **chitosan** microspheres tested except for those cross-linked with glutaraldehyde. This was due to the presence of water in P134a which hydrated and plasticized the **chitosan** microspheres causing aggregation during storage of the pMDI formulations. The change in the mass median aerodynamic diam. (MMAD) of the emitted dose of the pMDI systems reflected the influence of water on the particle size distribution of the **chitosan** microsphere pMDI suspension formulations. The pMDI systems studied produced respirable fractions (%RF) of 18% and multiple detns. of the dose delivery through-the-valve (DDV) of the pMDI systems were consistent. The surface hydrophobicity of the glutaraldehyde cross-linked **chitosan** microspheres was significantly greater than non crosslinked or tripolyphosphate (TPP) crosslinked **chitosan** microspheres. The addn. of aluminum hydroxide (Al(OH)₃) to non cross-linked **chitosan** microspheres did not significantly influence the surface hydrophobicity. A decrease in the free surface amine content and the zeta potential after exposure to P134a was related to hydration and plasticization by water contained in the pMDI formulations. The non crosslinked and the glutaraldehyde crosslinked **chitosan** microspheres were found to be potential candidates for carrying biotherapeutic compds. to the lung via a pMDI system due to their compatibility with P134a and their physicochem. characteristics.

ST **chitosan** microsphere inhaler
 IT Polymers, biological studies
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (biodegradable; pressurized metered dose inhaler system contg.
 chitosan microspheres and P134a)
 IT Drug delivery systems
 (inhalants; pressurized metered dose inhaler system contg.
 chitosan microspheres and P134a)
 IT Medical goods
 (inhalers; pressurized metered dose inhaler system contg.
 chitosan microspheres and P134a)
 IT Drug delivery systems
 (microspheres; pressurized metered dose inhaler system contg.
 chitosan microspheres and P134a)
 IT Crosslinking
 Particle size
 (pressurized metered dose inhaler system contg. **chitosan** .
 microspheres and P134a)
 IT 111-30-8, Glutaraldehyde 14127-68-5, Tripolyphosphate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (crosslinking agent; pressurized metered dose inhaler system
 contg. **chitosan** microspheres and P134a)
 IT 9012-76-4, Chitosan
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU
 (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (pressurized metered dose inhaler system contg. **chitosan**
 microspheres and P134a)
 IT 811-97-2, 1,1,1,2-Tetrafluoroethane

RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (propellant; pressurized metered dose inhaler system contg. chitosan microspheres and P134a)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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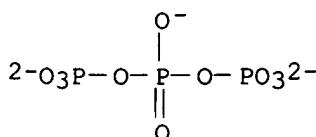
IT 14127-68-5, Tripolyphosphate

RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinking agent; pressurized metered dose inhaler system contg. chitosan microspheres and P134a)

RN 14127-68-5 HCAPLUS

CN Triphosphate (8CI, 9CI) (CA INDEX NAME)



IT 9012-76-4, Chitosan

RL: PEP (Physical, engineering or chemical process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (pressurized metered dose inhaler system contg. chitosan

microspheres and P134a)
 RN 9012-76-4 HCAPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 1998:268326 HCAPLUS
 DN 128:326334
 TI Collagen-free cosmetic preparations obtained from
 crosslinked chitosan hydrogels
 IN Heilemann, Andrea; Holzer, Josef; Horlacher, Peter;
 Sander, Andreas; Wachter, Rolf
 PA Henkel Kommanditgesellschaft auf Aktien, Germany; Heilemann, Andrea;
 Holzer, Josef; Horlacher, Peter; Sander, Andreas; Wachter, Rolf
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM A61K007-48
 ICS A61K007-00
 CC 62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9817245	A1	19980430	WO 1997-EP5618	19971010	<-- check
	W: JP, US RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	DE 19643066	A1	19980430	DE 1996-19643066	19961018	<--
	DE 19643066	C2	19990701			
	EP 939617	A1	19990908	EP 1997-912172	19971010	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2001502678	T2	20010227	JP 1998-518906	19971010	<--
PRAI	DE 1996-19643066	A	19961018			
	WO 1997-EP5618	W	19971010			<--
OS	MARPAT 128:326334					
AB	Collagen-free cosmetic preps., esp. suitable for producing face and hand moisturizing masks, are obtained by crosslinking water-swelled aq. suspensions of cationic biopolymers (esp. chitosan) with diisocyanates and/or dialdehydes, optionally in conjunction with polyols as plasticizers, and subsequently dehydrating the resulting prepn. Thus, a suspension of 40 g chitosan in 1960 g H ₂ O at 40.degree. was adjusted to pH 5.5 with HCl, homogenized with 2 g glycerin, crosslinked with 0.8 g hexamethylene diisocyanate, frozen, and lyophilized. The lyophilized block was elastic and water insol., and after rehydration resembled a sponge.					
ST	cosmetic mask crosslinked chitosan hydrogel					
IT	Glycosides					
	RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)					
	(alkyl, plasticizers; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)					
IT	Carbohydrates, biological studies					
	RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)					
	(amino sugars, plasticizers; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)					
IT	Polyelectrolytes					
	(cationic; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)					
IT	Biopolymers					
	RL: BUU (Biological use, unclassified); BIOL (Biological study); USES					

(Uses)
 (cationic; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Crosslinking
 Hydrogels
 (collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Collagens, biological studies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Dialdehydes
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Isocyanates
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (di-; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Cosmetics
 (face packs; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Alditols
 Carbohydrates, biological studies
 Glycols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (plasticizers; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT Alcohols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (polyhydric, plasticizers; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT 111-30-8, Glutaraldehyde 822-06-0, Hexamethylene diisocyanate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT 9012-76-4, Chitosan
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (hydrogel; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT 56-81-5, Glycerin, biological studies 25618-55-7, Polyglycerin
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (plasticizer; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT 67-56-1D, Methanol, derivs., biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (plasticizers; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

IT 9012-76-4, Chitosan
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (hydrogel; collagen-free cosmetic preps. obtained from crosslinked chitosan hydrogels)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 1998:163640 HCAPLUS
 DN 128:206128
 TI Biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports
 IN El Matni, Nada; Labarre, Denis; Fessim, Hatem
 PA Societe De Conseils De Recherches Et D'applications Scientifiques (S.C.R.A.S, Fr.; El Matni, Nada; Labarre, Denis; Fessim, Hatem
 SO PCT Int. Appl., 27 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM C08K005-17
 ICS C08B037-08; C08B037-06; C08B037-10; C08L005-08; C08L033-06; A61K009-20; C08L005-08; C08L033-06; C08L033-06; C08L005-08
 CC 44-5 (Industrial Carbohydrates)
 Section cross-reference(s): 35, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9808897	A1	19980305	WO 1997-FR1534	19970829 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	FR 2752843	A1	19980306	FR 1996-10601	19960830 <--
	FR 2752843	B1	19981016		
	ZA 9707671	A	19980223	ZA 1997-7671	19970826 <--
	AU 9741215	A1	19980319	AU 1997-41215	19970829 <--
	AU 730566	B2	20010308		
	EP 922071	A1	19990616	EP 1997-938958	19970829 <--
	EP 922071	B1	20011114		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001501228	T2	20010130	JP 1998-511342	19970829 <--
	AT 208803	E	20011115	AT 1997-938958	19970829 <--
	ES 2167784	T3	20020516	ES 1997-938958	19970829 <--
	US 6229009	B1	20010508	US 1999-242587	19990218 <--
	NO 9900935	A	19990415	NO 1999-935	19990226 <--
PRAI	FR 1996-10601	A	19960830 <--		
	WO 1997-FR1534	W	19970829 <--		

AB The title **crosslinked** copolymers are based on **non-crosslinked** polycarboxylic polymers and compds. contg. .gtoreq.2 amino groups as **crosslinking** agents, where the copolymers contain .gtoreq. polycarboxylic polysaccharide and .gtoreq.1 other **non-crosslinked** polycarboxylic polymer. The copolymers are used in particular as supports in pharmaceutical compns. A **crosslinked** polymer was prep'd. from chondroitin sulfate sodium salt, polymethacrylic acid sodium salt, and L-lysine chlorohydrate. ST biodegradable **crosslinked** polycarboxylic polymer pharmaceutical support; polysaccharide polycarboxylic acid **crosslinked** copolymer

IT Biodegradable materials

Crosslinking agents

(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Amino acids, uses

Glycosaminoglycans, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Adhesives
 (biol.; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Polysaccharides, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (carboxy; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Drug delivery systems
 (controlled-release; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (diamines; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT Amines, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyamines, nonpolymeric; biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT 203728-50-1P 203728-52-3P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT 70-54-2, Lysine 107-15-3, 1,2-Ethanediamine, uses 616-07-9, Ornithine 4998-57-6, Histidine 9000-69-5, Pectinic acid 9003-01-4 9003-16-1, Poly(fumaric acid) 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid 9005-49-6, Heparin, uses 9007-28-7, Chondroitin sulfate 9012-76-4, Chitosan 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 24937-49-3, Polyornithine 24967-94-0, Dermatan sulfate 24991-23-9 25087-26-7, Poly(methacrylic acid) 25104-12-5, Polyornithine 25104-18-1, Polylysine 25513-46-6, Poly(glutamic acid) 25608-40-6, Poly(aspartic acid) 26063-13-8, Poly(aspartic acid) 26099-09-2, Poly(maleic acid) 30140-39-7, Hexanediamine 38000-06-5, Polylysine 64012-50-6, Heptanediamine 69468-17-3, Butanediamine 75413-84-2, Octanediamine 78644-42-5, Poly(malic acid) 129825-84-9, Dodecanediamine 9012-76-4, Chitosan
 RL: TEM (Technical or engineered material use); USES (Uses)
 (biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

IT 9012-76-4, Chitosan
 RL: TEM (Technical or engineered material use); USES (Uses)
 (biodegradable polycarboxylic-based **crosslinked** copolymers for pharmaceutical supports)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 12 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 1997:473735 HCPLUS
 DN 127:83738
 TI Polymer enhanced foam workover, completion, and kill fluids
 IN Sydansk, Robert D.
 PA Marathon Oil Company, USA
 SO PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM E21B021-00
 ICS E21B033-13; E21B043-00
 CC 51-2 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9721018	A1	19970612	WO 1996-US17460	19961028 <-- ↙
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5706895	A	19980113	US 1995-568869	19951207 <--
	CA 2234173	AA	19970612	CA 1996-2234173	19961028 <--
	AU 9676010	A1	19970627	AU 1996-76010	19961028 <--
	GB 2322892	A1	19980909	GB 1998-11191	19961028 <--
	GB 2322892	B2	19990901		
	NO 9802600	A	19980605	NO 1998-2600	19980605 <--
PRAI	US 1995-568869		19951207 <--		
	WO 1996-US17460		19961028 <--		
AB	Polymer enhanced foam fluid is utilized for completion, workover, and kill operations in wells penetrating subterranean formation. The foam is formed by appropriately adding a gas to an aq. soln. of a substantially noncrosslinked water-sol. polymer and surfactant. The soln. and the foam are substantially free of crosslinking agents. The foam may be generated at the surface or in wellbore.				
ST	polymer enhanced foam workover completion fluid; well polymer enhanced foam kill fluid				
IT	Sulfonates				
	RL: NUU (Other use, unclassified); USES (Uses) (1-alkene, surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Sulfonic acids, uses				
	RL: NUU (Other use, unclassified); USES (Uses) (C14-16-1-alkene, sodium salts, surfactant; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Alcohols, uses				
	RL: NUU (Other use, unclassified); USES (Uses) (ethoxylated, surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Air				
	Flue gases (in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Biopolymers				
	Natural gas, uses				
	RL: NUU (Other use, unclassified); USES (Uses) (in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Polysaccharides, uses				
	RL: NUU (Other use, unclassified); USES (Uses) (poly(vinyl saccharides); in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Drilling fluids				
	Oil wells				
	Petroleum recovery				
	Petroleum reservoirs (polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				
IT	Sulfonates				
	RL: NUU (Other use, unclassified); USES (Uses) (surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)				

IT 79-06-1D, Acrylamide, polymers 124-38-9, Carbon dioxide, uses 7727-37-9, Nitrogen, uses 9000-30-0, Guar gum 9003-05-8, Polyacrylamide 9003-05-8D, Polyacrylamide, partially hydrolyzed 9004-32-4, Cmc 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9005-25-8D, Starch, modified, uses 9012-76-4D, Chitosan, O-carboxy 11138-66-2, Xanthan gum 39464-87-4, Scleroglucan 73667-50-2, Succinoglycan
 RL: NUU (Other use, unclassified); USES (Uses)
 (in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT 146103-92-6, Enordet 1215-3S 146104-88-3, Stepanflo 20
 RL: NUU (Other use, unclassified); USES (Uses)
 (surfactant; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT 7664-93-9D, Sulfuric acid, derivs., ethoxylated, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (surfactants; polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

IT 9012-76-4D, Chitosan, O-carboxy
 RL: NUU (Other use, unclassified); USES (Uses)
 (in polymer-enhanced foam workover, completion, and kill fluids as wellbore fluids)

RN 9012-76-4 HCPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 13 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 1996:698736 HCPLUS
 DN 125:338884
 TI Influence of **crosslinking** on the acid stability and physicochemical properties of **chitosan** microspheres
 AU Berthold, A.; Cremer, K.; Kreuter, J.
 CS Institut fur Pharmazeutische Technologie, Johann Wolfgang Goethe-Universitat, Frankfurt/Main, 60439, Germany
 SO S.T.P. Pharma Sciences (1996), 6(5), 358-364 ←
 CODEN: STSSE5; ISSN: 1157-1489
 PB Editions de Sante
 DT Journal
 LA English
 CC 63-5 (Pharmaceuticals)
 AB The aim of the present study was to improve the acid stability of chitosan microspheres and to investigate the influence of chem. crosslinking on essential physicochem. properties. For this purpose, previously manufd. microspheres were crosslinked by glutardialdehyde. The influence of glutardialdehyde concn. and crosslinking time on the microsphere size, surface charge, drug loading (with prednisolone sodium phosphate), acid stability, and hemolytic activity was studied. The acid stability was improved by crosslinking. Microsphere size and drug loading were influenced by the concn. of glutardialdehyde and the process time. Size and acid stability increased with increasing glutardialdehyde concns., whereas drug loading was reduced. Acid stability as well as loading efficacy also decreased with increasing reaction time. Size was not influenced by reaction time. The surface charge was not changed by the crosslinking process. Noncrosslinked as well as crosslinked microspheres caused no hemolytic effect, indicating good biocompatibility.
 ST crosslinking chitosan microsphere stability
 physicochem property
 IT Crosslinking
 Erythrocyte
 Particle size

(crosslinking effect on stability and physicochem. properties of chitosan microspheres)

IT Pharmaceutical dosage forms
(microspheres, crosslinking effect on stability and physicochem. properties of chitosan microspheres)

IT Electric charge
(surface, crosslinking effect on stability and physicochem. properties of chitosan microspheres)

IT 111-30-8, Glutardialdehyde 7722-84-1, Hydrogen peroxide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking effect on stability and physicochem. properties of chitosan microspheres)

IT 125-02-0, Prednisolone sodium phosphate 9012-76-4,
Chitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinking effect on stability and physicochem. properties of chitosan microspheres)

IT 9012-76-4, Chitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crosslinking effect on stability and physicochem. properties of chitosan microspheres)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

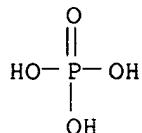
L79 ANSWER 14 OF 17 HCPLUS COPYRIGHT 2003 ACS
AN 1996:625359 HCPLUS
DN 125:250807
TI Control of Pore Sizes in Macroporous Chitosan and Chitin Membranes
AU Zeng, Xianfang; Ruckenstein, Eli
CS Department of Chemical Engineering, State University of New York, Buffalo, NY, 14260, USA
SO Industrial & Engineering Chemistry Research (1996), 35(11), 4169-4175
CODEN: IECRED; ISSN: 0888-5885
PB American Chemical Society
DT Journal
LA English
CC 44-5 (Industrial Carbohydrates)
AB A novel method for the prepn. of macroporous chitosan and chitin membranes is suggested, which employs silica particles as porogen. The macroporous chitosan membranes were prep'd. by (1) casting an acidic chitosan soln. that contains silica particles, (2) removing the solvent by evapn., and (3) dissolving the silica particles by immersing the membranes into an alk. soln. This simple method provides chitosan membranes with high porosity and satisfactory mech. strength, the pore sizes of which can be easily controlled by varying the size of silica particles. The effects of various evapn. conditions and amt. of silica on the flow rate of water through the membranes were investigated. To prevent its dissoln. in acidic solns., the chitosan membranes were cross-linked under alk. conditions, using epichlorohydrin as the crosslinking agent. Macroporous chitin membranes were prep'd. by acetylating the chitosan membranes with Ac2O in MeOH. In contrast to the noncrosslinked chitosan membranes, which are sol. in dil. acidic solns. and insol. in alk. solns., the chitin membranes are insol. both in acidic and basic solns. Both kinds of membranes can be employed in affinity or ion-exchange bio-sepns.
ST pore size macroporous chitosan chitin membrane
IT Membranes
(pore size control in macroporous chitosan and chitin

membranes)
 IT Pore
 (size; pore size control in macroporous **chitosan** and chitin
 membranes)
 IT 1398-61-4, Chitin 9012-76-4, Chitosan
 RL: PRP (Properties); TEM (Technical or engineered material use)
 ; USES (Uses)
 (membranes; pore size control in macroporous **chitosan** and
 chitin membranes)
 IT 7631-86-9, Silica, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (pore size control agents; pore size control in macroporous
chitosan and chitin membranes)
 IT 9012-76-4, Chitosan
 RL: PRP (Properties); TEM (Technical or engineered material use)
 ; USES (Uses)
 (membranes; pore size control in macroporous **chitosan** and
 chitin membranes)
 RN 9012-76-4 HCPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 15 OF 17 HCPLUS COPYRIGHT 2003 ACS
 AN 1994:418134 HCPLUS
 DN 121:18134
 TI materials for transplantation
 IN Akai, Tomoyuki
 PA Kyocera Corp, Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM A61L027-00
 CC 63-7 (Pharmaceuticals)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06105901	A2	19940419	JP 1992-257696	19920928
	JP 3064116	B2	20000712		
PRAI	JP 1992-257696		19920928		
AB	Biocompatible materials (e.g. bone implants) for transplantation are manufd. by mixing powd. Ca phosphate with chitin, chitosan or derivs., subjecting to heat drying under vacuum, covering the surface with noncrosslinked chitin, and treating with saline or other fluids to give an appropriate viscosity.				
ST	surgical implant calcium phosphate chitin; bone implant calcium phosphate chitin				
IT	Transplant and Transplantation (biocompatible materials contg. calcium phosphate and chitin for)				
IT	Bone (implant, calcium phosphate and chitin-contg.)				
IT	Prosthetic materials and Prosthetics (implants, calcium phosphate and chitin-contg.)				
IT	1398-61-4, Chitin 7757-93-9, Calcium phosphate 9012-76-4 , Chitosan RL: BIOL (Biological study) (surgical implants contg.)				
IT	7757-93-9, Calcium phosphate 9012-76-4, Chitosan RL: BIOL (Biological study) (surgical implants contg.)				
RN	7757-93-9 HCPLUS				
CN	Phosphoric acid, calcium salt (1:1) (8CI, 9CI) (CA INDEX NAME)				



Ca

RN 9012-76-4 HCAPLUS
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

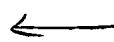
L79 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 1991:415424 HCAPLUS
 DN 115:15424
 TI Sustained release of aspirin from chitosan granules
 AU Lee, Young Chan; Yoo, Young Mi; Kim, Kong Soo; Shin, Jae Sup
 CS Dep. Chem., Chungbuk Natl. Univ., Cheongju, 360-763, S. Korea
 SO Polymer (Korea) (1990), 14(4), 342-5
 CODEN: POLLGD; ISSN: 0379-153X
 DT Journal
 LA Korean
 CC 63-5 (Pharmaceuticals)
 AB Chitosan was used as a controlled drug delivery device and aspirin was selected as a drug. Release rate was delayed with an increasing proportion of chitosan. The drug release rate at high pH was more delayed than at the low pH because chitosan granules have greater swelling abilities at low than at high pH. The release rate of aspirin from chitosan granules crosslinked with glutaraldehyde was delayed >3-fold compared to that from noncrosslinked granules.
 ST aspirin sustained release chitosan granule
 IT Crosslinking
 (of chitosan granules, for drug sustained release)
 IT Solution rate
 (of drugs, from chitosan granules, crosslinking and pH effect on)
 IT Pharmaceutical dosage forms
 (granules, sustained-release, of chitosan, drug release from, crosslinking and pH effect on)
 IT 111-30-8, Glutaraldehyde
 RL: BIOL (Biological study)
 (chitosan granules crosslinking with, for drug sustained release)
 IT 9012-76-4, Chitosan
 RL: BIOL (Biological study)
 (granules, drug sustained release from, crosslinking and pH effect on)
 IT 50-78-2, Aspirin
 RL: BIOL (Biological study)
 (sustained release of, from chitosan granules, crosslinking and pH effect on)
 IT 9012-76-4, Chitosan
 RL: BIOL (Biological study)
 (granules, drug sustained release from, crosslinking and pH effect on)
 RN 9012-76-4 HCAPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L79 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2003 ACS
 AN 1988:419879 HCAPLUS
 DN 109:19879
 TI Porous chitosan granules as adsorbents and their use in chromatography
 IN Moriguchi, Soyao; Suzuki, Hiroshi; Watanabe, Hiroko; Sato, Motoaki; Abe, Michio; Iwata, Yasuo
 PA Showa Denko K. K., Japan; Kawasumi Laboratories Inc.
 SO Ger. Offen., 16 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM B01J020-26
 ICS B01J020-30; B01D015-08; C08B037-08; A61K047-00; C07K017-10;
 C08L005-08
 ICA C07K015-06; G01N030-92
 CC 9-3 (Biochemical Methods)
 Section cross-reference(s): 80

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3727707	A1	19880225	DE 1987-3727707	19870819 <--
	DE 3727707	C2	19920514		
	JP 63048222	A2	19880229	JP 1986-192144	19860819 <--
	JP 63048451	A2	19880301	JP 1986-192141	19860819 <--
	JP 63048452	A2	19880301	JP 1986-192142	19860819 <--
	JP 63048453	A2	19880301	JP 1986-192143	19860819 <--
	JP 63200770	A2	19880819	JP 1987-33472	19870218 <--
	GB 2195344	A1	19880407	GB 1987-19348	19870814 <--
	GB 2195344	B2	19901024		
	US 4879340	A--	19891107	US 1987-86989	19870819 <-- 
	GB 2232984	A1	19910102	GB 1990-16548	19900727 <--
	GB 2232984	B2	19910508		
PRAI	JP 1986-192141		19860819 <--		
	JP 1986-192142		19860819 <--		
	JP 1986-192143		19860819 <--		
	JP 1986-192144		19860819 <--		
	JP 1987-33472		19870218 <--		
	GB 1987-19348		19870814 <--		

AB Porous granules of uncrosslinked or crosslinked chitosan, to which protein A is covalently bound, are useful for removal of an interleukin 2 inhibitor. The protein A is bound via a linker to the amino groups of uncrosslinked chitosan, and to these as well as the amino groups of the crosslinking agent in crosslinked chitosan. Chitosan granules bearing similarly bound lectin are useful as adsorbents for affinity chromatog. Chitosan granules bearing .omega.-carboxalkanoyl and acyl groups are useful as chromatog. carriers. An adsorbent for Ig comprises uncrosslinked or crosslinked chitosan granules. Xylylene diisocyanate-crosslinked porous chitosan granules (av. granule diam. 0.1 mm; av. pore size 0.07 .mu.m) were treated with glutaraldehyde, remaining free amino groups were blocked with Ac2O, and the granules were treated with N-hydroxysuccinimide and DCCD followed by Con A in the presence of Me .alpha.-mannopyranoside. The conjugate contained 15 mg Con A/g dry granules. This adsorbent was packed in a column and used for sepn. of p-nitrophenyl .alpha.-D-galactopyranoside and p-nitrophenyl .alpha.-D-mannopyranoside.
 ST chitosan adsorbent Ig; protein A adsorbent interleukin

inhibitor; lectin **chitosan** adsorbent carbohydrate; affinity chromatog adsorbent **chitosan**

IT Immunoglobulins
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (adsorption of, on **chitosan**)

IT Ovalbumins
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (adsorption of, on **chitosan** deriv.)

IT Adsorbents
 (**chitosan**)

IT Immunoglobulins
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (A, adsorption of, on **chitosan**)

IT Proteins, specific or class
 RL: ANST (Analytical study)
 (A, immobilized, on **chitosan**, Ig and interleukin 2 inhibitor
 adsorption on)

IT Immunoglobulins
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (G, adsorption of, on **chitosan**)

IT Immunoglobulins
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (M, adsorption of, on **chitosan**)

IT Chromatography, column and liquid
 (affinity, stationary phases, lectins immobilized on **chitosan**
 as)

IT Carboxylic acids, uses and miscellaneous
 RL: USES (Uses)
 (di-, immobilized, on **chitosan**, as chromatog. stationary
 phase)

IT Wheat
 (germ, lectin of, immobilized on **chitosan** for affinity
 chromatog.)

IT Agglutinins and Lectins
 (immobilized, on **chitosan**, for affinity chromatog.)

IT Lymphokines and Cytokines
 RL: ANST (Analytical study)
 (interleukin 2, sepn. of, protein A immobilized on **chitosan**
 for)

IT 9012-76-4, Chitosan
 RL: ANST (Analytical study)
 (as adsorbent, for chromatog.)

IT 822-06-0D, Hexamethylene diisocyanate, reaction products with
chitosan 25854-16-4D, Xylylene diisocyanate, reaction products
 with **chitosan**
 RL: ANST (Analytical study)
 (as adsorbents for chromatog.)

IT 11028-71-0
 RL: ANST (Analytical study)
 (immobilized, on **chitosan**, for affinity chromatog.)

IT 7493-95-0, p-Nitrophenyl .alpha.-D-galactopyranoside 10357-27-4,
 p-Nitrophenyl .alpha.-D-mannopyranoside
 RL: PROC (Process)
 (sepn. of, by chromatog. on **chitosan**-immobilized Con A)

IT 9012-76-4, Chitosan
 RL: ANST (Analytical study)
 (as adsorbent, for chromatog.)

RN 9012-76-4 HCPLUS

CN Chitosan (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> fil wpix
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 available in the /ABEX field. An additional search field
 /BIX is also provided which comprises both /BI and /ABEX <<<

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 SEE <http://www.derwent.com/dwpi/updates/dwpicov/index.html> <<<

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 PLEASE VISIT:

http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

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 GUIDES, PLEASE VISIT:
http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d all abeq tech abex tot

L115 ANSWER 1 OF 7 WPIX (C) 2003 THOMSON DERWENT
 AN 2001-381174 [40] WPIX
 DNC C2001-116703
 TI Polymer blend that swells in an acidic environment and deswells in a more
 neutral or basic environment, useful in the production of controlled
 release tablets, comprises chitosan and a second polymer..
 DC A96 B07
 IN BARK, J S; LIU, F; ZENTNER, G M; BARK, J
 PA (MACR-N) MACROMED INC
 CYC 94
 PI WO 2001034677 A1 20010517 (200140)* EN 29p C08G063-48 ←
 RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
 NL OA PT SD SE SL SZ TR TZ UG ZW
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
 DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
 LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
 SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
 AU 2001017605 A 20010606 (200152) C08G063-48
 EP 1240230 A1 20020918 (200269) EN C08G063-48
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI TR
 KR 2002047337 A 20020621 (200280) C08L005-08 --
 BR 2000015521 A 20021119 (200305) C08G063-48
 ADT WO 2001034677 A1 WO 2000-US30908 20001110; AU 2001017605 A AU 2001-17605
 20001110; EP 1240230 A1 EP 2000-980328 20001110, WO 2000-US30908 20001110;
 KR 2002047337 A KR 2002-705826 20020506; BR 2000015521 A BR 2000-15521
 20001110, WO 2000-US30908 20001110

FDT AU 2001017605 A Based on WO 200134677; EP 1240230 A1 Based on WO 200134677; BR 2000015521 A Based on WO 200134677

PRAI US 2000-710403 20001109; US 1999-438884 19991112

IC ICM C08G063-48; C08L005-08

ICS A61K031-73; C08G063-91; C08H001-06; C08J005-10; C08L001-08; C08L029-04

AB WO 200134677 A UPAB: 20011024

NOVELTY - A new polymer blend (I) that swells in an acidic environment and deswells in a more neutral or basic environment comprises (A) chitosan and (B) a second polymer wherein (A) and (B) are not covalently or ionically crosslinked. (I) is prepared by dissolving (A) and (B) in an acidic aqueous solution which is dehydrated to recover (I).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a polymer blend drug composition (II) that when exposed to aqueous conditions, swells in an acidic environment and deswells in a more neutral or basic environment and comprises a drug (C) combined with the polymer blend (I).

USE - The polymer blend (I) is useful in the production of tablets for oral ingestion, suppositories or implantable capsules.

ADVANTAGE - The polymer blend (I) allows the modulation of the release of biologically active material as a function of pH without dissolving.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A07-A01; A10-E09; A12-V01; B04-C02A2; B04-C02E3; B04-C03; B12-M08; B12-M10; B12-M11B; B12-M11C; B14-J01B4

TECH UPTX: 20010719

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The weight ratio of Chitosan (A) to the second polymer (B) is 1:4-10:1. (B) is polyether glycol, cellulose ester, poloxamer, polysaccharide, polyvinylpyrrolidone and/or polyvinyl alcohol. Chitosan (A) is 50-95 % deacetylated and has a Brookfield viscosity of 100-10,000, preferably 440-3,640 cps. The acid is acetic acid, citric acid and/or hydrochloric acid, preferably acetic acid and is a 0.5-11 (8-11) M aqueous solution. (B) has a weight average molecular weight (Mw) of 1,000-4,000,000. The blend (I) contains pH controlling additives or excipients to alter the swelling and deswelling properties. The drug (C) is combined with (A) and (B) by dissolving (C), (A) and (B) in the acidic aqueous solution to form a drug containing aqueous polymer blend and dehydrating and grinding the drug containing aqueous polymer blend. (C) is combined with (A) and (B) by swelling (B) in an acidic solution containing (C), equilibrating and dehydrating the swollen polymer blend containing the drug. The drug (C) is combined with (A) and (B) by admixing (C) in a particulate form with (I) in a particulate form.

ABEX

EXAMPLE - A solution comprising 85 % deacetylated chitosan (Brookfield viscosity of 810 cps) (15 g) in 1.0 M acetic acid (1 L) was mixed with polyethylene glycol (PEG) mol. wt. 2000 such that the weight ratio of chitosan to PEG was 2:1. The solution was then dried to form a brittle solid material which showed acceptable swelling behavior (did not dissolve at pH 2 after 24 hours) and deswelling behavior (Sorensen's phosphate buffer, pH 7.4, 80-90 % deswelling in 6-12 hours) without dissolving.

L115 ANSWER 2 OF 7 WPIX (C) 2003 THOMSON DERWENT
AN 2001-169891 [18] WPIX

DNC C2001-050996

TI Biodegradable, skin-compatible, crosslinker-free chitosan preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.

DC B07 D13 D21 P34

IN HEILEMANN, A; HOLZER, J; SANDER, A;

SCHAEFER, G

PA (COGN-N) COGNIS DEUT GMBH; (COGN-N)
COGNIS DEUT GMBH & CO KG

CYC 21

PI DE 19932075 A1 20010118 (200118)* 10p C08B037-08 <-- ↗ <--
WO 2001004207 A1 20010118 (200118) DE C08L005-08 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 1198508 A1 20020424 (200235) DE C08L005-08 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT DE 19932075 A1 DE 1999-19932075 19990712; WO 2001004207 A1 WO 2000-EP6162
20000701; EP 1198508 A1 EP 2000-943964 20000701, WO 2000-EP6162 20000701

FDT EP 1198508 A1 Based on WO 200104207

PRAI DE 1999-19932075 19990712

IC ICM C08B037-08; C08L005-08
ICS A23L001-056; A23L001-29; A61K007-00; A61K031-722;
A61K047-36; A61L015-28; A61P017-02

AB DE 19932075 A UPAB: 20010402
NOVELTY - A new **crosslinker-free** preparation (I) is obtained by treating an aqueous solution and/or homogenized suspension of **chitosans** (II) with precipitating agents (III) then dehydrating.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I) as above.
ACTIVITY - Hemostatic; vulnerary.
MECHANISM OF ACTION - None given.
USE - The use of (I) is claimed as a cosmetic agent, a medicament and/or medicinal product, a foodstuff or a food additive. Typically (I) is used as a cosmetic agent in the form of a dry film, absorber, mask or hemostatic foam for small wounds (e.g. shaking cuts); as a medicament or medicinal product in the form of a wound plug, wound or burn dressing, drug-releasing dressing, mono-woven or carrier for oral administration of drugs (e.g. analgesics or antibiotics); or as a nutritional supplement, dietetic foodstuff or food additive.
ADVANTAGE - (I) has mechanical properties comparable with those of prior art products obtained using chemical **crosslinkers** (due to physical **crosslinking** induced by (III)), but is **free** of chemical **crosslinker**-associated problems such as induction of skin irritation or allergies and reduction of biodegradability. (I) can be prepared with a 3-dimensional structure, in the form of a block, non-woven or mask; has good mechanical stability (in the wet or dry state), elasticity, swellability and water uptake properties; has good compatibility with skin and with other ingredients; is completely biodegradable; and can be prepared easily on an industrial scale. Typically (I) has an impact resistance at break (DIN 53 571, test piece B) of 10-1000 (especially 50-200) mM/mm² in the dry state or 10-500 (especially 30-100) mM/mm² in the wet state; an extension at break of 1-50 (especially 5-20)% in the dry state; and a water uptake capacity of at least 5 (especially at least 15) g/g.
Dwg.0/0

FS CPI GMPI

FA AB; DCN

MC CPI: B04-C02E3; B12-M02D; B14-E11; B14-N17A; B14-N17B; B14-R01;
D08-B; D08-B09A

TECH UPTX: 20010402
TECHNOLOGY FOCUS - POLYMERS - Preferred Process: The starting solution or suspension contains 0.1-15 wt. % (II) (specifically cationic derivatized **chitosan**), and has pH 1-7.5 and viscosity 1000-100000 (preferably 10000-40000) mPa.s. (III) is an aqueous solution of an alkali(ne earth) metal (bi)carbonate, hydrogen phosphate or hydroxide, ammonia or nitrogen-containing organic base, especially aqueous sodium bicarbonate solution. The precipitated (II) has pH 5.0-14. Dehydration is effected by lyophilization. Auxiliaries and additives (specifically polyols, emulsifiers, fibers, dyes, perfume oils, aromas, cosmetic or

pharmaceutical active agents or foods additives) are optionally added to the starting solution (before and/or after addition of (III)) or after dehydration.

ABEX

EXAMPLE - A suspension comprising 2 kg Hydagen CMFP (RTM; chitosan), 98 kg water and 0.346 kg L(+) -lactic acid was homogenized in a colloid mill at 40degreesC until the viscosity was 23000 mPa.s, cooled to 10degreesC and degassed under vacuum. 9 kg portions of the mixture were each mixed with 360 g of 8.05 wt. % sodium bicarbonate solution for 2 minutes, then cast in molds at a thickness of 22 mm. After 3 hours the suspension was frozen then lyophilized at 80degreesC/1 mbar to give blocks of thickness 1.5 mm and size 20 x 30 cm.

L115 ANSWER 3 OF 7 WPIX (C) 2003 THOMSON DERWENT

AN 2001-160577 [17] WPIX

DNC C2001-048043

TI Biodegradable, skin-compatible, **crosslinker-free** biopolymer preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.

DC B07 D13 D21

IN HEILEMANN, A; HOLZER, J; SANDER, A;
SCHAEFER, GPA (COGN-N) COGNIS DEUT GMBH; (COGN-N)
COGNIS DEUT GMBH & CO KG

CYC 21

PI DE 19932076 A1 20010118 (200117)* 9p C08B037-00
WO 2001004187 A1 20010118 (200117) DE C08J003-00 ↗ check
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US

EP 1198494 A1 20020424 (200235) DE C08J003-00
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT DE 19932076 A1 DE 1999-19932076 19990712; WO 2001004187 A1 WO 2000-EP6161
20000701; EP 1198494 A1 EP 2000-949239 20000701, WO 2000-EP6161 20000701

FDT EP 1198494 A1 Based on WO 200104187

PRAI DE 1999-19932076 19990712

IC ICM C08B037-00; C08J003-00

ICS A23L001-29; A61K007-00; A61K007-48; C08J005-00

AB DE 19932076 A UPAB: 20010328

NOVELTY - A new **crosslinker-free** preparation (I) is obtained by treating an aqueous solution and/or homogenized suspension of biopolymers (II) with precipitating agents (III) then dehydrating.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I) as above.

ACTIVITY - Hemostatic; vulnerary.

MECHANISM OF ACTION - None given.

USE - The use of (I) is claimed as a cosmetic agent, a medicament and/or medicinal product, a foodstuff or a food additive. Typically (I) is used as a cosmetic agent in the form of a dry film, absorber, mask or hemostatic foam for small wounds (e.g. shaking cuts); as a medicament or medicinal product in the form of a wound plug, wound or burn dressing, drug-releasing dressing, mono-woven or carrier for oral administration of drugs (e.g. analgesics or antibiotics); or as a nutritional supplement, dietetic foodstuff or food additive.

ADVANTAGE - (I) has mechanical properties comparable with those of prior art products obtained using chemical **crosslinkers** (due to physical **crosslinking** induced by (III)), but is **free** of chemical **crosslinker**-associated problems such as induction of skin irritation or allergies and reduction of biodegradability. (I) can be prepared with a 3-dimensional structure, in the form of a block, non-woven or mask; has good mechanical stability (in the wet or dry state), elasticity, swellability and water uptake properties; has good compatibility with skin and with other ingredients; is completely biodegradable; and can be prepared easily on an industrial scale.

Typically (I) has an impact resistance at break (DIN 53 571, test piece B) of 10-1000 (especially 50-200) mM/mm² in the dry state or 10-500 (especially 30-100) mM/mm² in the wet state; an extension at break of 1-50 (especially 5-20)% in the dry state; and a water uptake capacity of at least 5 (especially at least 15) g/g.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B04-C02A1; B04-C02A2; B04-C02D; B05-A01A; B05-A01B; B05-C04;
B14-N17B; B14-R01; D08-B; D08-B09A

TECH UPTX: 20010328

TECHNOLOGY FOCUS - POLYMERS - Preferred Process: The starting solution or suspension contains 0.1-15 wt. % (II), and has pH 1-12 and viscosity 1000-100000 (preferably 10000-40000) mPa.s. (III) is an aqueous solution of an alkali(ne earth) metal (bi)carbonate, hydrogen phosphate or hydroxide, ammonia or nitrogen-containing organic base, especially aqueous sodium bicarbonate solution; or an aqueous solution of mineral acid or organic carboxylic acid. The precipitated (II) has pH 1.0-14. Dehydration is effected by lyophilization. Auxiliaries and additives (specifically polyols, emulsifiers, fibers, dyes, perfume oils, aromas, cosmetic or pharmaceutical active agents or foods additives) are optionally added to the starting solution (before and/or after addition of (III)) or after dehydration. Biopolymers: Suitable (I) (not specified in the claims) are polysaccharides (e.g. inulin, mannans, galactans, xylans, chitin, chitosan, cellulose, pectin, alginates, carrageenan, agar or locust bean gum) or their derivatives (e.g. carboxymethyl cellulose; anionically or nonionically derivatized chitosan; or polyelectrolyte derivatives having carboxy and/or sulfo groups).

ABEX

EXAMPLE - None given.

L115 ANSWER 4 OF 7 WPIX (C) 2003 THOMSON DERWENT

AN 2001-014859 [02] WPIX

CR 1994-135566 [16]; 1999-166652 [14]

DNC C2001-003944

TI Encapsulated viable cells comprise viable cells dispersed in 3-dimensional particulate, essentially non-crosslinked, chitosan core matrices encapsulated in thermoplastic semipermeable membrane.

DC B04 D16

IN AEBISCHER, P; ZIELINSKI, B A

PA (UYBR-N) UNIV BROWN RES FOUND

CYC 1

PI US 6140089 A 20001031 (200102)* 9p C12N011-10 *clue 2*.

ADT US 6140089 A Cont of US 1992-952249 19920928, CIP of US 1994-176323 19940103, Div ex US 1994-294149 19940822, US 1999-251004 19990216

FDT US 6140089 A Div ex US 5871985

PRAI US 1994-294149 19940822; US 1992-952249 19920928; US 1994-176323 19940103; US 1999-251004 19990216

IC ICM C12N011-10

ICS C12N005-00; C12N011-04

AB US 6140089 A UPAB: 20010110

NOVELTY - Encapsulated viable cells comprising viable cells dispersed in a three-dimensional particulate, essentially non-crosslinked, chitosan core matrix encapsulated in a thermoplastic semipermeable membrane formed by precipitation of a chitosan solution containing the cells.

DETAILED DESCRIPTION - Encapsulated viable cells comprise viable cells dispersed in a three-dimensional particulate, essentially non-crosslinked, chitosan core matrix encapsulated in a thermoplastic semipermeable membrane, in which the core matrix is formed by precipitation of a chitosan solution containing the cells before the solution has been encapsulated in a

thermoplastic semipermeable membrane.

An INDEPENDENT CLAIM is also included for implantable immunoisolatory vehicles for providing biologically active products to hosts.

ACTIVITY - Antidiabetic; antiparkinsonian; neuroprotective.

MECHANISM OF ACTION - None given.

USE - The encapsulated viable cells are used in implantable immunoisolatory vehicles to provide biologically active products to hosts for the treatment of diabetes, Parkinson's disease and other neurological disorders, and to deliver sources of trophic or sprouting factors to support peripheral nerve repair or regeneration.

ADVANTAGE - The encapsulated viable cells are formed in the absence of **crosslinking** agents and are essentially **uncrosslinked**. The particulate **chitosan** provides or acts as an irregular scaffolding into which cells are **free** to grow. The matrix provides a large growth area that does not restrict the ability of the cells to divide and expand. Formation of the encapsulated viable cells is not dependent upon the presence of the **chitosan** matrix so that the properties of either the jacket or the matrix may be varied without concerns for effects on each other. The jacket allows diffusion of nutrients, waste materials and secreted products when cultured or implanted in an individual, but may be immunostimulatory and may block the cellular and molecular effectors of immunological rejection.

Dwg.0/2

FS CPI

FA AB; DCN

MC CPI: B04-C02E3; B04-F01; B04-F02; B04-F04; B12-M11C; B14-J01; B14-J01A3; B14-S04; D05-H08

TECH UPTX: 20010110

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Cells: The cells are neurosecretory cell lines (PC12 cells), beta-derived cell lines (NIT or RIN cells), fibroblasts, myocytes or glial cells (astrocytes).

ABEX

EXAMPLE - No relevant example is given.

L115 ANSWER 5 OF 7 WPIX (C) 2003 THOMSON DERWENT

AN 1998-089294 [09] WPIX

DNC C1998-030265

TI Cosmetic or dermatological composition in form of viscous aqueous gel for topical application in hair dressing and styling gels - contains **non crosslinked** acrylic copolymer with hydrophobic chain, surfactant and film forming polymer.

DC A14 A25 A96 B04 D21

IN DUBIEF, C; DUPUIS, C

PA (OREA) L'OREAL SA

CYC 1

PI FR 2750047 A1 19971226 (199809)* 23p A61K007-11

ADT FR 2750047 A1 FR 1996-7611 19960619

PRAI FR 1996-7611 19960619

IC ICM A61K007-11

AB FR 2750047 A UPAB: 19980302

Cosmetic or dermatological composition for topical application, in the form of a stable, high viscosity aqueous gel comprises (wt.%) (a) 0.1-20 at least one **non-crosslinked** acrylic copolymer with a hydrophobic chain; (b) 0.01-1 of a surface active agent; and (c) 0.05-10 of a film-forming cationic or amphoteric polymer with a cationic charge density of less than about 3.5 meq/g.

USE - The composition is used in hair dressing and hair styling gels.

ADVANTAGE - The combination of components (a), (b) and (c) gives stable, high viscosity aqueous gels with excellent adhesive properties, ease of application and distribution on the hair, and which due to their low surfactant content do not need to be rinsed off.

Dwg.0/0

FS CPI

FA AB; DCN
 MC CPI: A04-F01A; A12-V01; A12-V04A; B04-C03; B14-N17; B14-R01; D08-B03;
 D08-B05

 L115 ANSWER 6 OF 7 WPIX (C) 2003 THOMSON DERWENT
 AN 1997-319852 [29] WPIX
 DNN N1997-264721 DNC C1997-103365
 TI Process for hydrocarbon well completion, workover and kill operations - by
 preparing aqueous solution of water-soluble non-
 crosslinked polymer and water-soluble surfactant to which gas is
 added to form polymer enhanced foam and placing foam in well.
 DC A11 A14 A97 H01 Q49
 IN SYDANSK, R D
 PA (MAOC) MARATHON OIL CO
 CYC 74
 PI WO 9721018 A1 19970612 (199729)* EN 42p E21B021-00 ←
 RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD
 SE SZ UG
 W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
 HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX
 NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
 AU 9676010 A 19970627 (199742) E21B021-00
 US 5706895 A 19980113 (199809) 22p E21B021-00
 NO 9802600 A 19980605 (199836) E21B000-00
 GB 2322892 A 19980909 (199838) E21B021-00
 GB 2322892 B 19990901 (199937) E21B021-00
 MX 9803724 A1 19980901 (200017) E21B021-00
 ADT WO 9721018 A1 WO 1996-US17460 19961028; AU 9676010 A AU 1996-76010
 19961028; US 5706895 A US 1995-568869 19951207; NO 9802600 A WO
 1996-US17460 19961028, NO 1998-2600 19980605; GB 2322892 A WO 1996-US17460
 19961028, GB 1998-11191 19980522; GB 2322892 B WO 1996-US17460 19961028,
 GB 1998-11191 19980522; MX 9803724 A1 MX 1998-3724 19980511
 FDT AU 9676010 A Based on WO 9721018; GB 2322892 A Based on WO 9721018; GB
 2322892 B Based on WO 9721018
 PRAI US 1995-568869 19951207
 REP US 3530940; US 3637021; US 4440653; US 4995461; US 5129457; US 5358046
 IC ICM E21B000-00; E21B021-00
 ICS E21B033-13; E21B043-00
 AB WO 9721018 A UPAB: 19970716
 Process for use during hydrocarbon well completion, workover and kill
 operations comprises (a) preparing an aqueous solution of a water-soluble,
 non-crosslinked polymer and a water-soluble surfactant,
 the aqueous solution being free of agents capable of
 crosslinking the polymer, (b) adding a gas to the aqueous solution
 to form a polymer enhanced foam and, (c) placing the foam in a well
 penetrating a subterranean formation during completion, workover or kill
 operation.
 USE - For use in hydrocarbon well completion, workover and kill
 operations.
 ADVANTAGE - Fluid effectively performs at relatively low fracture or
 parting pressure gradient without fracturing or parting the formation,
 prevents leak-off under a wide range of conditions, and is stable under
 harsh formation conditions. Also cost-effective and practical to use, is
 self-healing and is easy to remove from the wellbore after operation
 completion.
 Dwg.0/12
 FS CPI GMPI
 FA AB
 MC CPI: A08-B01; A08-C01; A08-D01; A11-B06A; A11-C02D; A12-S04A1; A12-W10;
 H01-C
 ABEQ US 5706895 A UPAB: 19980302
 Process for use during hydrocarbon well completion, workover and kill
 operations comprises (a) preparing an aqueous solution of a water-soluble,

non-crosslinked polymer and a water-soluble surfactant, the aqueous solution being free of agents capable of crosslinking the polymer, (b) adding a gas to the aqueous solution to form a polymer enhanced foam and, (c) placing the foam in a well penetrating a subterranean formation during completion, workover or kill operation.

USE - For use in hydrocarbon well completion, workover and kill operations.

ADVANTAGE - Fluid effectively performs at relatively low fracture or parting pressure gradient without fracturing or parting the formation, prevents leak-off under a wide range of conditions, and is stable under harsh formation conditions. Also cost-effective and practical to use, is self-healing and is easy to remove from the wellbore after operation completion.

Dwg.0/11

L115 ANSWER 7 OF 7 WPIX (C) 2003 THOMSON DERWENT
 AN 1994-135566 [16] WPIX
 CR 1999-166652 [14]; 2001-014859 [02]
 DNC C1994-062752
 TI Encapsulation device for viable cells - comprising a 3-dimensional particulate, non-crosslinked chitosan core matrix in a jacket.
 DC B04 D16
 IN AEBISCHER, P; ZIELINSKI, B A
 PA (UYBR-N) UNIV BROWN RES FOUND
 CYC 23
 PI WO 9407999 A1 19940414 (199416)* EN 33p C12N011-10
 RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
 W: AU CA FI JP KR NO
 AU 9349322 A 19940426 (199432) C12N011-10
 FI 9501239 A 19950316 (199525) C12N000-00
 NO 9501173 A 19950327 (199526) C12N000-00
 EP 663951 A1 19950726 (199534) EN C12N011-10
 R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
 JP 08502166 W 19960312 (199644) 27p C12N011-10
 EP 663951 A4 19970402 (199732) C12N011-10
 AU 687359 B 19980226 (199821) C12N005-00
 EP 663951 B1 20020605 (200238) EN C12N011-10
 R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
 DE 69331997 E 20020711 (200253) C12N011-10
 ES 2177549 T3 20021216 (200306) C12N011-10
 ADT WO 9407999 A1 WO 1993-US9023 19930922; AU 9349322 A AU 1993-49322 19930922; FI 9501239 A WO 1993-US9023 19930922, FI 1995-1239 19950316; NO 9501173 A WO 1993-US9023 19930922, NO 1995-1173 19950327; EP 663951 A1 EP 1993-921720 19930922, WO 1993-US9023 19930922; JP 08502166 W WO 1993-US9023 19930922, JP 1994-509162 19930922; EP 663951 A4 EP 1993-921720; AU 687359 B AU 1993-49322 19930922; EP 663951 B1 EP 1993-921720 19930922, WO 1993-US9023 19930922; DE 69331997 E DE 1993-631997 19930922, EP 1993-921720 19930922, WO 1993-US9023 19930922; ES 2177549 T3 EP 1993-921720 19930922
 FDT AU 9349322 A Based on WO 9407999; EP 663951 A1 Based on WO 9407999; JP 08502166 W Based on WO 9407999; AU 687359 B Previous Publ. AU 9349322, Based on WO 9407999; EP 663951 B1 Based on WO 9407999; DE 69331997 E Based on EP 663951, Based on WO 9407999; ES 2177549 T3 Based on EP 663951
 PRAI US 1992-952249 19920928
 REP US 4167447; US 4495288; US 4803168; US 4892538; US 5158881; WO 8702703; EP 301777; US 4713249; WO 8800237
 IC ICM C12N000-00; C12N005-00; C12N011-10
 ICS A61K009-16; A61L027-00; C12N005-02; C12N005-06; C12N011-04; G01N033-50
 AB WO 9407999 A UPAB: 20030124
 An encapsulation device for maintaining, growing proliferating or

differentiating viable cells comprises a 3-dimensional particulate, non-crosslinked chitosan core matrix enclosed in a permeable or semipermeable jacket.

USE/ADVANTAGE - The device can be used to encapsulate neurosecretory cell lines (e.g. PC12), beta-cell-derived cell lines (e.g. NIT or RIN), fibroblasts, myocytes or glial cells. The device can be used as an implantable immuno-isolator vehicle for providing a biologically active prod. or function to an individual. The chitosan core matrix promotes viability and maintenance of function of the cells.

Dwg.0/2

FS CPI
FA AB
MC CPI: B04-C02E3; B04-F01; D05-H08

=> d all abeq tech abex tot

L119 ANSWER 1 OF 2 WPIX (C) 2003 THOMSON DERWENT
 AN 2002-074903 [10] WPIX
 CR 2001-031656 [66]
 DNC C2002-022206
 TI Dried hemoactive material, for inhibiting bleeding and delivering active agent to patients, comprises crosslinked polymer which forms hydrogel, dispersed in non-crosslinked polymer which solubilizes when exposed to blood.
 DC A96 B04 B07 D22
 IN OSAWA, A E; REICH, C J; TRAN, H
 PA (FUSI-N) FUSION MEDICAL TECHNOLOGIES INC; (OSAW-I) OSAWA A E; (REIC-I) REICH C J; (TRAN-I) TRAN H
 CYC 21
 PI WO 2000076533 A1 20001221 (200210)* EN 26p A61K038-00
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: JP
 EP 1185288 A1 20020313 (200225) EN A61K038-00
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 US 2002042378 A1 20020411 (200227) A61K038-00
 JP 2003501215 W 20030114 (200306) 29p A61L033-00
 ADT WO 2000076533 A1 WO 2000-US15998 20000609; EP 1185288 A1 EP 2000-942742
 20000609, WO 2000-US15998 20000609; US 2002042378 A1 US 1999-330315
 19990610; JP 2003501215 W WO 2000-US15998 20000609, JP 2001-502866
 20000609
 FDT EP 1185288 A1 Based on WO 200076533; JP 2003501215 W Based on WO 200076533
 PRAI US 1999-330315 19990610
 IC ICM A61K038-00; A61L033-00
 ICS A01N025-34; A01N043-04; A61F013-00; A61K009-00; A61K009-36;
 A61K009-40; A61K031-715; A61K031-74; A61K035-14; A61K038-16;
 A61K038-17; C07K001-00; C07K014-00; C07K016-00; C07K017-00;
 C08H001-00; C08H001-06; C09H001-00; C09H003-00; C09H003-02
 AB WO 200076533 A UPAB: 20020213
 NOVELTY - A dried hemoactive material, comprises:
 (i) a crosslinked biologically compatible polymer which forms a hydrogel when exposed to blood; and
 (ii) a non-crosslinked biologically compatible polymer which solubilizes when exposed to blood;
 The crosslinked polymer is dispersed in a dried matrix of the non-crosslinked polymer.
 DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
 (1) a kit comprising:
 (a) a sterile pack;
 (b) a sterile sheet of the hemostatic material in the sterile pack;
 and
 (c) instructions for use.
 (2) a method for inhibiting bleeding, comprises applying the material

to a wound site;

(3) a method for delivering an active agent to a patient, comprises exposing the material to a patient's blood; and

(4) the preparation of the hemoactive material.

ACTIVITY - Vulnerary; Coagulant.

MECHANISM OF ACTION - None given.

USE - The material is used for inhibiting bleeding and for delivering an active agent to a patient (both claimed), e.g. for delivering drugs to an abraded or damaged tissue surface, such as the liver, spleen, heart, kidney, intestine, blood vessels, vascular organs, etc.

ADVANTAGE - The sheet can conform to any irregularities in the tissue surface, and will immediately begin absorbing water from the blood present on the site.

Dwg.0/3

FS CPI

FA AB; DCN

MC CPI: A12-V01; A12-V03A; B04-B04D2; B04-C02A; B04-C02B; B04-C02D; B04-C03; B04-D01; B04-G01; B04-H19; B04-J01; B04-L01; B04-N02; B14-A01; B14-A02; B14-C03; B14-F02; B14-F08; B14-H01; D09-C04B

TECH UPTX: 20020213

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The crosslinked polymer comprises 50-95 wt.% of the material, and the non-crosslinked material comprises 50-1 wt.% of the material. A plasticizer is also present (in at least the non-crosslinked polymer) and comprises 1-20 wt.% of the material. An active agent is also present, preferably in both the non-crosslinked polymer and in the crosslinked polymer.

Preferred Materials: The hemoactive material comprises a dry gelatin matrix, with dry, crosslinked gelatin polymer particles dispersed in the dry non-crosslinked gelatin matrix.

The plasticizer is selected from polyethylene glycol, sorbitol, and glycerol. The active agents comprise antibiotics, anti-neoplastic agents, bacteriostatic agents, bactericidal agents, antiviral agents, anesthetics, anti-inflammatory agents, hormones, anti-angiogenic agents, antibodies, enzymes, enzyme inhibitors, and neurotransmitters. The active agent is a hemostatic substance, preferably a clotting factor (preferably thrombin).

Preferred Crosslinked Polymer: The crosslinked polymer is:

- (a) a protein selected from the group comprising gelatin, collagen, albumin, hemoglobin, fibrinogen, fibrin, fibronectin, elastin, keratin, laminin, and casein; or
- (b) a carbohydrate (derivative) selected from glycosaminoglycans, starches, celluloses, hemicelluloses, xylan, agarose, alginate, and chitosan; or
- (c) a non-biological hydrogel-forming polymer or copolymer selected from the group consisting of polyacrylates, polymethacrylates, polyacrylamides, polyvinyl polymers, polylactides glycolides, polycaprolactones, polyoxyethylenes, and their copolymers.

Preferred Non-Crosslinked Polymer: The non-crosslinked biologically compatible polymer is:

- (a) a protein selected from the group consisting of gelatin, collagen, albumin, elastin, and keratin; or
- (b) a carbohydrate (derivative) selected from glycosaminoglycans, alginate, starch, cellulose, and their derivatives.

Preferred Properties: The crosslinked polymer has a degradation time of at least one day. The non-crosslinked polymer solubilizes in at most 15 minutes when exposed to blood. The crosslinked polymer is fragmented so that, upon hydration in blood, the polymer will form a gel with a sub-unit size in the range from 0.01 mm to 5 mm. The crosslinked polymer has an equilibrium swell of 400-5,000%.

Preferred Form: The material is in the form of a sheet having a thickness of 1-25 mm. The sheet is packed in a sterile pack.

Preferred Preparation: The hemostatic material is prepared by:

- (a) dissolving a **non-crosslinked** biologically compatible polymer which solubilizes when exposed to blood in an aqueous medium;
- (b) suspending particles of a **crosslinked** biologically compatible polymer which forms a hydrogel when exposed to blood in the aqueous medium; and
- (c) drying the aqueous medium to form a solid phase comprising the dried polymeric particles in a dry matrix of the **non-crosslinked** polymer.

ABEX

EXAMPLE - Heparin was administered intravenously to a farm grade Hampshire/Yorkshire cross pig to prolong the activated clotting time of the animal to approximately three to five times its baseline value. A shallow circular divot, approximately 1 cm in diameter, was surgically produced on the spleen of the pig. The resulting lesion bled freely. A piece of the lyophilized composite material according to the invention was prepared, approximately 2.0 cm x 3.0 cm in size. The piece was applied to the lesion with compression for two minutes. After compression was removed, no bleeding was observed. Three minutes later, some slight re-bleeding occurred in areas not fully contacted with the material. Additional material was applied with compression for one minute. After compression was removed, no further bleeding was observed. The lesion appeared to be sealed with a mixture of clotted blood and the applied composite material.

L119 ANSWER 2 OF 2 WPIX (C) 2003 THOMSON DERWENT

AN 1999-166652 [14] WPIX

CR 1994-135566 [16]; 2001-014859 [66]

DNC C1999-048579

TI Preparation of tissue implantable vehicle comprising viable cells - comprises mixing dissolved **chitosan** with viable cells and encapsulating the mixture with a semipermeable membrane.

DC B04 D16 D22

IN AEBISCHER, P; ZIELINSKI, B A

PA (UYBR-N) UNIV BROWN RES FOUND

CYC 1

PI US 5871985 A 19990216 (199914)* 10p C12N011-10

ADT US 5871985 A Cont of US 1992-952249 19920928, CIP of US 1994-176323 19940103, US 1994-294149 19940822

PRAI US 1994-294149 19940822; US 1992-952249 19920928; US 1994-176323 19940103

IC ICM C12N011-10

ICS C12N005-00; C12N011-04

AB US 5871985 A UPAB: 20010110

NOVELTY - The method provides a **non-cross-linked** particulate **chitosan** core matrix for living cell encapsulation. The matrix is placed in thermoplastic jackets, where the formation of the capsule is not dependent upon the presence of the **chitosan** matrix (e.g. through interfacial **cross-linking**) so that the properties of either the jacket or the matrix may be varied without concern for effects on each other. DETAILED

DESCRIPTION - The preparation of a tissue implantable vehicle comprising viable cells within a core matrix, comprises: (a) mixing a solution of dissolved **chitosan** with viable cells; (b) encapsulating the mixture within a semipermeable membrane to form a vehicle; and (c) causing the **chitosan** to precipitate to form a **non-cross-linked**, particulate **chitosan** core matrix, while avoiding formation of a **cross-linked** **chitosan** solid or gel. The core does not restrict the viable cells to divide and expand.

USE - The formed capsules are used to transplant cells selected from neurosecretory cells, beta -cell-derived cell lines, fibroblasts, myocytes

and glial cells.

Dwg.0/2

FS CPI

FA AB; DCN

MC CPI: B04-F01; B12-M11C; D05-A01A

=> fil dpci

FILE 'DPCI' ENTERED AT 12:36:20 ON 03 FEB 2003

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FILE LAST UPDATED: 20 JAN 2003 <20030120/UP>
PATENTS CITATION INDEX, COVERS 1973 TO DATE

>>> LEARNING FILE LDPCI AVAILABLE <<<

=> d all tot

L120 ANSWER 1 OF 2 DPCI (C) 2003 THOMSON DERWENT

AN 2001-169891 [18] DPCI

DNC C2001-050996

TI Biodegradable, skin-compatible, crosslinker-free chitosan preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.

DC B07 D13 D21 P34

IN HEILEMANN, A; HOLZER, J; SANDER, A; SCHAEFER, G

PA (COGN-N) COGNIS DEUT GMBH; (COGN-N) COGNIS DEUT GMBH & CO KG

CYC 21

PI DE 19932075 A1 20010118 (200118)* 10p C08B037-08 <--

WO 2001004207 A1 20010118 (200118) DE C08L005-08 <--

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: JP US

EP 1198508 A1 20020424 (200235) DE C08L005-08 <--

R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

ADT DE 19932075 A1 DE 1999-19932075 19990712; WO 2001004207 A1 WO 2000-EP6162 20000701; EP 1198508 A1 EP 2000-943964 20000701, WO 2000-EP6162 20000701

FDT EP 1198508 A1 Based on WO 200104207

PRAI DE 1999-19932075 19990712

IC ICM C08B037-08; C08L005-08

ICS A23L001-056; A23L001-29; A61K007-00; A61K031-722; A61K047-36; A61L015-28; A61P017-02

FS CPI GMPI

EXF EXAMINER'S FIELD OF SEARCH UPE: 20010419

IC DE 19932075 A1 20010118
A23L001-9; A61K007-0; A61P017-02; C08B037-08

CTCS CITATION COUNTERS

PNC.DI 0 Cited Patents Count (by inventor)

PNC.DX 6 Cited Patents Count (by examiner)

IAC.DI 0 Cited Issuing Authority Count (by inventor)

IAC.DX 4 Cited Issuing Authority Count (by examiner)

PNC.GI 0 Citing Patents Count (by inventor)

PNC.GX 0 Citing Patents Count (by examiner)

IAC.GI 0 Citing Issuing Authority Count (by inventor)

IAC.GX 0 Citing Issuing Authority Count (by examiner)

CRC.I 0 Cited Literature References Count (by inventor)

CRC.X 4 Cited Literature References Count (by examiner)

CDP CITED PATENTS UPD: 20020206

Cited by Examiner

CITING PATENT	CAT	CITED PATENT	ACCNO
DE 19932075	A1	DE 3903797	A1 1990-248096/33
	PA:	(FARH) HOECHST AG	
	IN:	DONGES, R; MEISTER, C	
		WO 9620015	A2 1996-280184/29
	PA:	(KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK	
		WORLDWIDE INC; (KIMB) KIMBERLY-CLARK CORP	
	IN:	DUTKIEWICZ, J; NING, X; QIN, J; SUN, T	
WO 200104207	A X	JP 1062302	A 1989-117701/16
	PA:	(NIUS) NIPPON SUISAN KAISHA LTD;	
	X	JP 63017901	A 1988-061314/09
	PA:	(HGET) HIGETA SHOYU KK	
	X	JP 63090507	A 1988-150559/22
	PA:	(NIRA) UNITIKA LTD	
	X	US 4833237	A 1986-043366/07
	PA:	(FUJN) FUJI SPINNING CO LTD	
	IN:	KAWAMURA, Y; KURAHASHI, I; NAKAJIMA, S; SEO, H;	
		TANIBE, H	

REN LITERATURE CITATIONS UPR: 20020206

Citations by Examiner

CITING PATENT	CAT	CITED LITERATURE
DE 19932075	A1	Journal of Applied Polymer Science, 1987, Bd. 33, Nr. 1, S. 177-189
WO 200104207	A	DATABASE WPI Week 198916 Derwent Publications Ltd., London, GB; AN 1989-117701 XP002151163 "WATER SOLUBLE CHITOSAN SALT USED FOR UePACKING COSMETICS, ETC...-PREPD BY NEUTRALISING ACIDIC AQ. SOLN. OF CHITOSAN WITH CARBONATE" & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & PATENT ABSTRACTS OF JAPAN vol. 013, no. 260 (C-607), 15. Juni 1989 (1989-06-15) & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & CHEMICAL ABSTRACTS, vol. 111, no. 9, 28. August 1989 (1989-08-28) Columbus, Ohio, US; abstract no. 78544, "MANUFACTURE OF WATER-SOLUBLE CHITOSAN SALTS"
WO 200104207	A	CHEMICAL ABSTRACTS, vol. 111, no. 2, 10. Juli 1989 (1989-07-10) Columbus, Ohio, US; abstract no. 12542, "CHITOSAN SPONGES AS SURGICAL DRESSINGS" XP002151162 & JP 63 090507 A (UNIKITA LTD) 21. April 1988 (1988-04-21)
WO 200104207	A	DATABASE WPI Week 198809 Derwent Publications Ltd., London, GB; AN 1988-061314 XP002151164 "PURIFICN. OF CHITOSAN - BY ADJUSTING PH OF SOLN. CONTG. CHITOSAN, TO ABOUT 6, TO FORM DEPOSIT WHICH IS OPT. WASHED WITH WATER AND DISSOLVED IN ACID" & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & CHEMICAL ABSTRACTS, vol. 108, no. 22, 30. Mai 1988 (1988-05-30) Columbus, Ohio, US;

abstract no. 188789, "PURIFICATION OF CHITOSAN"

L120 ANSWER 2 OF 2 DPCI (C) 2003 THOMSON DERWENT
 AN 2001-160577 [17] DPCI
 DNC C2001-048043
 TI Biodegradable; skin-compatible, crosslinker-free biopolymer preparation, useful in cosmetic, medicinal or foodstuff applications, obtained by precipitation and dehydration.
 DC B07 D13 D21
 IN HEILEMANN, A; HOLZER, J; SANDER, A; SCHAEFER, G
 PA (COGN-N) COGNIS DEUT GMBH; (COGN-N) COGNIS DEUT GMBH & CO KG
 CYC 21
 PI DE 19932076 A1 20010118 (200117)* 9p C08B037-00 <--
 WO 2001004187 A1 20010118 (200117) DE C08J003-00 <--
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: JP US
 EP 1198494 A1 20020424 (200235) DE C08J003-00 <--
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 ADT DE 19932076 A1 DE 1999-19932076 19990712; WO 2001004187 A1 WO 2000-EP6161
 20000701; EP 1198494 A1 EP 2000-949239 20000701, WO 2000-EP6161 20000701
 FDT EP 1198494 A1 Based on WO 200104187
 PRAI DE 1999-19932076 19990712
 IC ICM C08B037-00; C08J003-00
 ICS A23L001-29; A61K007-00; A61K007-48; C08J005-00
 FS CPI

EXF EXAMINER'S FIELD OF SEARCH UPE: 20010411

IC DE 19932076 A1 20010118
 A23L001-9; A61K007-0; A61K007-8; C08B037-00

CTCS CITATION COUNTERS

PNC.DI	0	Cited Patents Count (by inventor)
PNC.DX	6	Cited Patents Count (by examiner)
IAC.DI	0	Cited Issuing Authority Count (by inventor)
IAC.DX	3	Cited Issuing Authority Count (by examiner)
PNC.GI	0	Citing Patents Count (by inventor)
PNC.GX	0	Citing Patents Count (by examiner)
IAC.GI	0	Citing Issuing Authority Count (by inventor)
IAC.GX	0	Citing Issuing Authority Count (by examiner)
CRC.I	0	Cited Literature References Count (by inventor)
CRC.X	7	Cited Literature References Count (by examiner)

CDP CITED PATENTS UPD: 20020206

Cited by Examiner

CITING PATENT	CAT	CITED PATENT	ACCNO
DE 19932076	A1	DE 19836960	A1 2000-184038/17
	PA:	(ZIMM-I) ZIMMERMANN U	
	IN:	BEHRINGER, M; ZIMMERMANN, U	
WO 200104187	A X	EP 538904	A 1993-136141/17
	PA:	(KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK	
		WORLDWIDE INC	
	IN:	NING, X; SUN, T	
	X	JP 1062302	A 1989-117701/16

PA: (NIUS) NIPPON SUISAN KAISHA LTD
 A JP 56104902 A 1981-72788D/40
 PA: (KIMI-N) KIMITSU KAGAKU KENKYUSHO
 X JP 63017901 A 1988-061314/09
 PA: (HGET) HIGETA SHOYU KK
 X JP 63090507 A 1988-150559/22
 PA: (NIRA) UNITIKA LTD

REN LITERATURE CITATIONS UPR: 20020206

Citations by Examiner

CITING PATENT	CAT	CITED LITERATURE
DE 19932076	A1	ASPINAL, G.O. AEHrsg.Ue: The Polysaccharides. New York Aeu.a.Ue: Academic Press, 1982, Bd. 1, S. 26-31
DE 19932076	A1	WHISTLER, R.L., BEMILLER, J.N., WOLFROM, M.L. AEHrsg.Ue: Methods in Carbohydrate Chemistry. New York Aeu.a.Ue: Academic Press, 1965, Bd. 5, General Polysaccharides, S. 34-46
DE 19932076	A1	Journal of Applied Polymer Science, 1987, Bd. 33, Nr. 1, S. 177-189
WO 200104187	A	DATABASE WPI Week 198809 Derwent Publications Ltd., London, GB; AN 1988-061314 XP002153004 & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & PATENT ABSTRACTS OF JAPAN vol. 012, no. 223 (C-507), 24. Juni 1988 (1988-06-24) & JP 63 017901 A (HIGETA SHOYU KK), 25. Januar 1988 (1988-01-25) & CHEMICAL ABSTRACTS, vol. 108, no. 22, 30. Mai 1988 (1988-05-30) Columbus, Ohio, US; abstract no. 188789,
WO 200104187	A	CHEMICAL ABSTRACTS, vol. 111, no. 2, 10. Juli 1989 (1989-07-10) Columbus, Ohio, US; abstract no. 12542, "Chitosan sponges as surgical dressings." XP002153003 & JP 63 090507 A (UNITIKA LTD) 21. April 1988 (1988-04-21)
WO 200104187	A	PATENT ABSTRACTS OF JAPAN vol. 013, no. 260 (C-607), 15. Juni 1989 (1989-06-15) & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08) & CHEMICAL ABSTRACTS, vol. 111, no. 9, 28. August 1989 (1989-08-28) Columbus, Ohio, US; abstract no. 78544, "MANUFACTURE OF WATER SOLUBLE CHITOSAN SALTS" & DATABASE WPI Week 198916 Derwent Publications Ltd., London, GB; AN 1989-117701 & JP 01 062302 A (NIPPON SUISAN KAISHA LTD), 8. Maerz 1989 (1989-03-08)
WO 200104187	A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 180 (C-079), 19. November 1981 (1981-11-19) & JP 56 104902 A (KIMITSU KAGAKU KENKYUSHO:KK), 21. August 1981 (1981-08-21)

=> d all abeq tech abex tot

L130 ANSWER 1 OF 8 WPIX (C) 2003 THOMSON DERWENT

AN 2000-184038 [17] WPIX

DNN N2000-135789 DNC C2000-057910

TI Production of high-purity alginate useful for making capsules of encapsulating implants comprises extraction, sedimentation, filtration and precipitation.

DC A11 B07 D13 D22 F06 P34
 IN BEHRINGER, M; ZIMMERMANN, U
 PA (ZIMM-I) ZIMMERMANN U
 CYC 22
 PI DE 19836960 A1 20000217 (200017)* 6p C08B037-04
 WO 2000009566 A1 20000224 (200018) DE C08B037-04
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
 W: CA NZ US
 EP 1109837 A1 20010627 (200137) DE C08B037-04
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
 ADT DE 19836960 A1 DE 1998-19836960 19980814; WO 2000009566 A1 WO 1999-EP5867
 19990812; EP 1109837 A1 EP 1999-941584 19990812, WO 1999-EP5867 19990812
 FDT EP 1109837 A1 Based on WO 200009566
 PRAI DE 1998-19836960 19980814
 IC ICM C08B037-04
 ICS A61K009-20; A61K009-48; A61L027-00; C08L005-04
 AB DE 19836960 A UPAB: 20000405
 NOVELTY - Production of high-purity alginate comprises: (a) extracting algal material or crude alginate with a solution of a complexing agent; (b) sedimenting cell components and particles from the solution with a porous binder, (c) filtering the solution; (d) precipitating alginate from the solution; and (e) collecting the precipitate.
 DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an alginate composition consisting of a copolymer of mannuronic acid (MA) and guluronic acid (GA) with a MA:GA ratio of 1-90:100 and a molecular weight above 1000 kD.
 USE - The product is useful for making capsules or for encapsulating implants, e.g. pancreatic islets.
 ADVANTAGE - The process is suitable for large-scale operation and gives products with a higher molecular weight (above 1000 kD) than prior art processes (compare US5429821 and US5656468) and low immunogenicity.
 Dwg.0/0
 FS CPI GMPI
 FA AB; DCN
 MC CPI: A03-A; A10-G01B; A12-V02; A12-W05; B04-C02D; B04-F08; B12-M11C;
 D03-H; D09-C; F03-E
 TECH UPTX: 20000405
 TECHNOLOGY FOCUS - POLYMERS - Preferred Process: Step (a) comprises extracting fresh algal material (especially brown seaweed) or commercial alginate with a sodium carbonate solution containing ethylenediamine tetraacetic acid (EDTA). The binder comprises porous granules of kieselguhr, cellulose, recycled material or electrographite. The solution is filtered through a series of filters with decreasing pore sizes. The alginate is precipitated with an alcohol, preferably at a concentration of 10-30%. The precipitated alginate is collected by frothing or decantation. The product is dewatered. The extraction, filtration, precipitation and dewatering steps can be repeated.
 L130 ANSWER 2 OF 8 WPIX (C) 2003 THOMSON DERWENT
 AN 1996-280184 [29] WPIX
 DNC C1996-088887
 TI Prepn. of chitosan salt of absorptive properties e.g. for diapers - comprises recovery of chitosan salt from mixt. of mono- and multi-basic acid(s), water and water-insoluble chitosan and opt. heat treating.
 DC A11 A96 D22 F07
 IN DUTKIEWICZ, J; NING, X; QIN, J; SUN, T
 PA (KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC; (KIMB) KIMBERLY-CLARK CORP
 CYC 67
 PI GB 2296250 A 19960626 (199629)* 49p C08B037-08
 WO 9620015 A2 19960704 (199632) EN 52p A61L000-00 <--
 RW: AT BE CH DE DK ES FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ
 UG

W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE
 KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE
 SG SI SK TJ TM TT UA UG UZ VN

FR 2728575 A1 19960628 (199633) 68p C08B037-08
 ZA 9510740 A 19960828 (199639) 54p C08B000-00
 WO 9620015 A3 19960906 (199645) C08B037-08 <--
 AU 9645167 A 19960719 (199647) A61L015-60
 US 5599916 A 19970204 (199711) 18p C08B037-08
 GB 2296250 B 19970910 (199739) C08B037-08
 EP 799247 A1 19971008 (199745) EN C08B037-08

R: DE FR GB IT
 TW 323286 A 19971221 (199815) C08B037-08
 AU 689692 B 19980402 (199823) A61L015-60
 JP 10511720 W 19981110 (199904) 53p C08B037-08
 KR 98700880 A 19980430 (199914) A61L015-28
 MX 9704660 A1 20000701 (200134) A61L000-00
 EP 799247 B1 20020710 (200253) EN C08B037-08

R: DE FR GB IT
 DE 69527370 E 20020814 (200261) C08B037-08

ADT GB 2296250 A GB 1995-26240 19951221; WO 9620015 A2 WO 1995-US16191
 19951214; FR 2728575 A1 FR 1995-15230 19951221; ZA 9510740 A ZA 1995-10740
 19951218; WO 9620015 A3 WO 1995-US16191 19951214; AU 9645167 A AU
 1996-45167 19951214; US 5599916 A US 1994-362395 19941222; GB 2296250 B GB
 1995-26240 19951221; EP 799247 A1 EP 1995-943779 19951214, WO 1995-US16191
 19951214; TW 323286 A TW 1995-113624 19951220; AU 689692 B AU 1996-45167
 19951214; JP 10511720 W WO 1995-US16191 19951214, JP 1996-520480 19951214;
 KR 98700880 A WO 1995-US16191 19951214, KR 1997-704277 19970621; MX
 9704660 A1 MX 1997-4660 19970620; EP 799247 B1 EP 1995-943779 19951214, WO
 1995-US16191 19951214; DE 69527370 E DE 1995-627370 19951214, EP
 1995-943779 19951214, WO 1995-US16191 19951214

FDT AU 9645167 A Based on WO 9620015; EP 799247 A1 Based on WO 9620015; AU
 689692 B Previous Publ. AU 9645167, Based on WO 9620015; JP 10511720 W
 Based on WO 9620015; KR 98700880 A Based on WO 9620015; EP 799247 B1 Based
 on WO 9620015; DE 69527370 E Based on EP 799247, Based on WO 9620015

PRAI US 1994-362395 19941222

REP No-SR.Pub; 2.Jnl.Ref; EP 627225; JP 01182302

IC ICM A61L000-00; A61L015-60; C08B000-00; C08B037-08
 ICS A61F000-00; B01J000-00

ICA A61L015-28; A61L015-42

ICI A61L015-60

AB GB 2296250 A UPAB: 19960724
 Prepn. of a water-swellable, water-insoluble chitosan salt (I), having an
 initial Absorbency under Load (AUL) value 14 g/g, comprises: (i) formation
 of a mixt. of pH 2-6.5, of (a) water-insoluble chitosan, (b) water and
 (c) an acid from mono- and multibasic acids of pKa, below 6, all pKan
 being more than 5.5 and n being an integer more than 1; and (ii) recovery
 of (I). Opt. (1) after recovery of the water-soluble chitosan salt,
 treatment under humid conditions or at a temp. and for a period follows to
 obtain (I); or (2) the recovered chitosan salt comprises an amt. of the
 original crystalline structure to give (I). Also claimed is (I)
 described.

USE - (I) is suitable for personal care prods., e.g. diapers,
 training pants, adult incontinence prods. and feminine care prods..

ADVANTAGE - Natural based (I) has absorptive properties similar to
 synthetic, highly absorptive materials.

Dwg.1/1

FS CPI

FA AB; GI

MC CPI: A03-A; A09-A08; A12-V03A; D09-C02; D09-C03; D09-C04; D09-C04D;
 D09-C05; D09-C06; F04-C01; F04-E04

ABEQ US 5599916 A UPAB: 19970313
 A process for preparing a water-swellable, water-insoluble chitosan salt,
 the process comprises:

forming a mixture comprising a water-insoluble chitosan, water, and an add selected from the group consisting of monobasic acids having a pKa₁ less than about 6 and multi-basic acids having a pKa₁ less than about 6 and all pKa_n greater than about 5.5, wherein n is an integer greater than 1, wherein the mixture has an equilibrium pH between about 2 and about 6.5, and wherein the mixture is prepared under conditions effective to form a water-soluble chitosan salt, wherein the water-soluble chitosan salt dissolves into the water to form a homogeneous mixture; and recovering the chitosan salt from the homogeneous mixture, wherein the recovered chitosan salt is water swellable and water insoluble and exhibits an initial Absorbency Under Load value of at least about 14 grams per gram.

Dwg.0/1

ABEQ GB 2296250 B UPAB: 19970926

A water-swellable, water-insoluble chitosan salt wherein the chitosan salt exhibits an initial Absorbency Under Load value of at least about 14 grams per gram.

Dwg.1

L130 ANSWER 3 OF 8 WPIX (C) 2003 THOMSON DERWENT
 AN 1993-136141 [17] WPIX
 DNN N1993-103817 DNC C1993-060675
 TI Water swellable, water insol carboxyalkyl-polysaccharide - having improved absorbency, prep'd. by heat treating carboxyalkyl polysaccharide recovered from aq. soln..
 DC A11 A96 D22 F07 P34
 IN NING, X; SUN, T
 PA (KIMB) KIMBERLY CLARK CORP; (KIMB) KIMBERLY-CLARK WORLDWIDE INC
 CYC 16
 PI EP 538904 A2 19930428 (199317)* EN 24p C08B037-00 <--
 R: BE DE ES FR GB IT NL SE
 BR 9204036 A 19930504 (199322) C08B003-00
 AU 9227291 A 19930429 (199324) C08B015-04
 CA 2073292 A 19930426 (199328) C08B011-20
 ZA 9207461 A 19930630 (199331) 39p A41B000-00
 JP 05214001 A 19930824 (199338) 14p C08B011-12
 US 5247072 A 19930921 (199339) 20p C08B011-12
 EP 538904 A3 19931013 (199510) C08B037-00 <--
 AU 658455 B 19950413 (199524) C08B015-04
 TW 268899 A 19960121 (199615) A61L015-28
 EP 538904 B1 19971217 (199804) EN 27p C08B037-00 <--
 R: BE DE ES FR GB IT NL SE
 DE 69223587 E 19980129 (199810) C08B037-00
 ES 2111032 T3 19980301 (199815) C08B037-00
 KR 238386 B1 20000115 (200114) C08B037-02
 EP 538904 B2 20011010 (200167) EN C08B037-00 <--
 R: BE DE ES FR GB IT NL SE
 JP 3249201 B2 20020121 (200207) 13p C08B011-12
 ADT EP 538904 A2 EP 1992-118266 19921026; BR 9204036 A BR 1992-4036 19921016;
 AU 9227291 A AU 1992-27291 19921023; CA 2073292 A CA 1992-2073292
 19920707; ZA 9207461 A ZA 1992-7461 19920929; JP 05214001 A JP 1992-287917
 19921026; US 5247072 A CIP of US 1991-782853 19911025, Cont of US
 1991-808086 19911211, US 1992-952216 19920928; EP 538904 A3 EP 1992-118266
 19921026; AU 658455 B AU 1992-27291 19921023; TW 268899 A TW 1992-108274
 19921017; EP 538904 B1 EP 1992-118266 19921026; DE 69223587 E DE
 1992-623587 19921026, EP 1992-118266 19921026; ES 2111032 T3 EP
 1992-118266 19921026; KR 238386 B1 KR 1992-19656 19921024; EP 538904 B2 EP
 1992-118266 19921026; JP 3249201 B2 JP 1992-287917 19921026
 FDT AU 658455 B Previous Publ. AU 9227291; DE 69223587 E Based on EP 538904;
 ES 2111032 T3 Based on EP 538904; JP 3249201 B2 Previous Publ. JP 05214001
 PRAI US 1991-782853 19911025; US 1991-808086 19911211
 REP No-SR.Pub; FR 2510628; GB 1086323; US 3723413; US 3858585; US 4200736
 IC ICM A41B000-00; A61L015-28; C08B003-00; C08B011-12; C08B011-20;

C08B015-04; C08B037-00; C08B037-02

ICS A61F000-00; C08B015-10; C08L000-00

ICA A61L015-00

AB EP 538904 A UPAB: 19931116

Producing a water-swellable, water-insoluble carboxyalkyl polysaccharide cpd. comprises forming a soln. comprising a water-soluble carboxyalkyl, polysaccharide having an average deg. of substitution of 0.3-1.5 and water, recovering the carboxyalkyl polysaccharide from the soln., and heat treating the recovered carboxyalkyl polysaccharide at a temp. and for a time to crosslink and render carboxyalkyl polysaccharide and water-insoluble.

Pref. soln. is neutral or basic and comprises 0.01-90 wt.% of the carboxyalkyl polysaccharide which has a deg. of substitution of 0.4-1.2. Polysaccharide is recovered from the soln. by evaporative drying or by pptn., and the polysaccharide is heat-treated at 120-200 deg.C esp. 130-170 deg.C pref. for 1-120 minutes, esp. 5-60 minutes.

USE/ADVANTAGE - Natural-based, highly absorbent material is suitable for use in personal care absorbent prods. e.g. diapers, training pants, adult incontinence prods., feminine care prods.

In an example, 2 wt.% aq. soln. of NaCMC (average deg. of substitution 0.7) was prep'd. and the pH adjusted to 7.4 by addn. of NaOH (0.1 H). CMC was recovered by evaporative drying at 80 deg.C, ground into granules and heat-treated at 150 deg.C for 60 minutes. Prod. had an Absorbency Under Load of 24.8 g/g and Free-Swell Capacity of 43.7 g/g.

Dwg.0/0

FS CPI GMPI

FA AB

MC CPI: A03-A04; A03-A05; A10-E08C; D09-C05; D09-C06; F04-C01; F04-E04

ABEQ ZA 9207461 A UPAB: 19931118

Producing a water-swellable, generally water-insoluble, carboxyalkyl polysaccharide having improved absorption properties involves forming a soln. of carboxyalkyl polysaccharide and water, recovering the carboxyalkyl polysaccharide from the soln., and heat-treating the recovered carboxyalkyl polysaccharide. Also, described is a carboxyalkyl polysaccharide having improved absorption properties.

Dwg.0/0

ABEQ US 5247072 A UPAB: 19931123

Prodn. of a water-swellable water-insol. carboxyalkyl polysaccharide comprises (i) forming an aq. soln. of a water-soluble carboxyalkyl polysaccharide having 0.3-1.5 average deg. of substitution, (ii) recovering carboxyalkyl polysaccharide from the soln., and (iii) heating at sufficient temp. to crosslink carboxyalkyl polysaccharide and render it insoluble.

Pref. polysaccharide is cellulose. Deg. of substitution of cellulose is 0.4-1.2. Deg. of acidification of soln. is up to 0.07.

USE/ADVANTAGE - Polysaccharides have ability to absorb liq. while under a load. Esp. useful in e.g. diapers, incontinence prods., feminine hygiene prods. etc.

Dwg.1/10

ABEQ EP 538904 B UPAB: 19980126

Producing a water-swellable, water-insoluble carboxyalkyl polysaccharide cpd. comprises forming a soln. comprising a water-soluble carboxyalkyl, polysaccharide having an average deg. of substitution of 0.3-1.5 and water, recovering the carboxyalkyl polysaccharide from the soln., and heat treating the recovered carboxyalkyl polysaccharide at a temp. and for a time to crosslink and render carboxyalkyl polysaccharide and water-insoluble.

Pref. soln. is neutral or basic and comprises 0.01-90 wt.% of the carboxyalkyl polysaccharide which has a deg. of substitution of 0.4-1.2. Polysaccharide is recovered from the soln. by evaporative drying or by pptn., and the polysaccharide is heat-treated at 120-200 deg.C esp. 130-170 deg.C pref. for 1-120 minutes, esp. 5-60 minutes.

USE/ADVANTAGE - Natural-based, highly absorbent material is suitable

for use in personal care absorbent prods. e.g. diapers, training pants, adult incontinence prods., feminine care prods.

In an example, 2 wt.% aq. soln. of NaCMC (average deg. of substitution 0.7) was prep'd. and the pH adjusted to 7.4 by addn. of NaOH (0.1 M). CMC was recovered by evaporative drying at 80 deg.C, ground into granules and heat-treated at 150 deg.C for 60 minutes. Prod. had an Absorbency Under Load of 24.8 g/g and Free-Swell Capacity of 43.7 g/g. Dwg. 0/10

L130 ANSWER 4 OF 8 WPIX (C) 2003 THOMSON DERWENT

AN 1990-248096 [33] WPIX

DNC C1990-107105

TI Activating chitosan by treating with acid in suspension medium - which does not dissolve the salt formed, for subsequent derivatisation to cpds. useful e.g. as agricultural fungicides.

DC A11 A35 A97 B04 C03 F06 F09

IN DONGES, R; MEISTER, C

PA (FARH) HOECHST AG

CYC 13

PI EP 382150 A 19900816 (199033)* ← check

R: BE CH DE ES FR GB IT LI NL

<--

DE 3903797 A 19900816 (199034)

NO 9000613 A 19900903 (199041)

CA 2009384 A 19900809 (199043)

JP 02235905 A 19900918 (199043)

EP 382150 B1 19940504 (199418) DE 11p C08B037-08

R: BE CH DE ES FR GB IT LI NL

DE 59005566 G 19940609 (199424) C08B037-08

ES 2054117 T3 19940801 (199432) C08B037-08

US 5442048 A 19950815 (199538) 9p C08B037-08

ADT EP 382150 A EP 1990-102263 19900206; DE 3903797 A DE 1989-3903797

19890209; JP 02235905 A JP 1990-26227 19900207; EP 382150 B1 EP

1990-102263 19900206; DE 59005566 G DE 1990-505566 19900206, EP

1990-102263 19900206; ES 2054117 T3 EP 1990-102263 19900206; US 5442048 A

Cont of US 1990-476263 19900207, US 1993-166738 19931214

FDT DE 59005566 G Based on EP 382150; ES 2054117 T3 Based on EP 382150

PRAI DE 1989-3903797 19890209

REP 1.Jnl.Ref; A3...9104; EP 265561; EP 65491; JP 61060701; NoSR.Pub; WO 8707618; 02Jnl.Ref

IC C02F011-12; C08B037-08

ICM C08B037-08

ICS C02F011-12; C07H001-00

AB EP 382150 A UPAB: 19930928

Activation of chitosan (I) comprises addn. of acid to form a salt and pref. subsequent addn. of base. The new feature is that the additions are carried out in a suspension medium which prevents significant dissolution of the chitosan salt.

More specifically the suspension medium is (a) an aq. soln. of inorganic salt, or (b) an organic medium (opt. mixed with water). (I) is used as comminuted material of particle size below 1 (esp. 0.05-0.2) mm, and activation is at 20-150 (pref. 50-70) deg.C for 1-600 (pref. 10-60) min.

USE/ADVANTAGE - The activated material is used for prepn. of water-soluble or -insoluble chitosan derivs. (A) by treatment with cpds. which are known to react with polysaccharides or amines. The resulting derivs. are various useful for sludge dewatering; as cement thickeners; as paper or textile auxiliaries; absorbents; as food and animal feed additives; in prepn. of membranes; in cosmetics; as agricultural fungicides; or in immunology, biochemistry (e.g. for sepn. or immobilisation of enzymes), medical appts. This method of activation is simple, generally applicable, requires only a small reaction volume, and allows prepn. of derivs. contg. strongly hydrophobic or sterically bulky substs.

0/0
 FS CPI
 FA AB
 MC CPI: A10-E09; A12-W11; B04-C02E3; C04-C02E3; F03-B; F03-C; F05-A06C;
 F05-A06D
 ABEQ EP 382150 B UPAB: 19940622
 A process for activating chitosan by adding acid for salt formation, followed by adding bases, which comprises carrying out the addition of acid and the addition of bases in an aqueous solution of an inorganic salt which largely prevents the chitosan salts from dissolving.
 Dwg.0/0
 ABEQ US 5442048 A UPAB: 19950927
 Activation of chitosan by addn. of acid for salt formation comprises carrying out acid addn. in a suspending agent comprising a chitosan and an aq. soln. of inorganic salt selected from chloride, nitrate, sulphate, and acetate salts which are readily soluble in water. The aq. salt soln. prevents the chitosan salts from dissolving.
 Pref. the chitosan has been comminuted to a particle size of less than 1 (0.05-0.2)mm and activation is carried out over 1-600(10-60) mins. maintaining pH 1-5 (2-3) during acidification and 8-13 (9-11) after addn. of base.
 USE - Activated chitosans are used to prepare chitosan derivs. by reaction with polysaccharides or amines comprising organic halogen cpds. selected from organic halogen cpds. selected from alkylhalides, halocarbocyclic acids, etc. alkylene oxides, glycidyl ethers, acid anhydrides, aldehydes, vinyl cpds. or cpds. which can be grafted by means of free radicals in the presence of a free radical initiator.
 Dwg.0/0

L130 ANSWER 5 OF 8 WPIX (C) 2003 THOMSON DERWENT
 AN 1988-150559 [22] WPIX
 DNN N1988-114969 DNC C1988-067120
 TI Chitosan sponge, for protecting wounds and stopping bleeding - comprises sponge which is insol. in water or aq. soln. of acetic acid.
 DC A11 A96 D22 P34
 PA (NIRAI) UNITIKA LTD
 CYC 1
 PI JP 63090507 A 19880421 (198822)* 5p <--
 JP 07051603 B2 19950605 (199527) 4p C08B037-08
 ADT JP 63090507 A JP 1986-236622 19861003; JP 07051603 B2 JP 1986-236622 19861003
 FDT JP 07051603 B2 Based on JP 63090507
 PRAI JP 1986-236622 19861003
 IC A61L015-01; C08B037-08
 ICM C08B037-08
 ICS A61L015-01; A61L015-16
 AB JP 63090507 A UPAB: 19930923
 Chitosan sponge is insol. in water or 2 % aq. soln. of acetic acid and has void content of at least 80 %.

USE/ADVANTAGE - Used for protecting wounds and stopping bleeding. It has high wet strength and dissolving resistance to exuded blood and body fluids and good haemostatic effect.

In an example chitosan powder (of 10 g) is suspended in distilled water (970 ml). Glacial acetic acid (20 ml) is added to the suspension. They are stirred for 2 hr and filtered to obtain a chitosan soln. Na dodecyl alcohol sulphate (of 0.5 g) is added to the chitosan soln. (of 400 g). The mixt. is violently stirred to foam the chitosan soln. and extruded from a cylinder (dia. 1.5 cm) into methanol contg. 4 w/v % of NaOH to coagulate the chitosan soln. in columnar shape. The coagulated prod. is washed with water and methanol, immersed in a mixt. of methanol (of 950 g) and acetic anhydride (of 50 g), stirred at 60 deg.C for 4 hr., washed with methanol and water and freeze-dried to obtain a columnar chitosan sponge. It has void content 96 % and wet strength 2.8 g/mm². It does not dissolve

in water or in 2 % aq. soln. of acetic acid at 25 deg.C even after being soaked for 6 hr..

0/0

FS CPI GMPI

FA AB

MC CPI: A10-E09; A12-S04; A12-V03A; A12-V03B; A12-V03C1; D09-C04B

L130 ANSWER 6 OF 8 WPIX (C) 2003 THOMSON DERWENT

AN 1988-061314 [09] WPIX

DNC C1988-027675

TI Purificn. of chitosan - by adjusting pH of soln. contg. chitosan, to about 6, to form deposit which is opt. washed with water and dissolved in acid.

DC D17

PA (HGET) HIGETA SHOYU KK

CYC 1

PI JP 63017901 A 19880125 (198809)* 4p

<--

ADT JP 63017901 A JP 1986-159793 19860709

PRAI JP 1986-159793 19860709

IC C08B037-08

AB JP 63017901 A UPAB: 19930923

Purifying chitosan comprises adjusting the pH of a soln. contg. chitosan to at least 6.0, pref. 6.5 to form deposit. The deposit is, if necessary, washed with water and dissolved in an acid. The pH of the obtd. soln. is adjusted to at least 6.0, pref. at least 6.5. These procedures of washing, dissolution and deposition are pref. repeated.

ADVANTAGE - Deposition of chitosan is completely effected by only adjusting the pH of a soln. contg. chitosan. The deposit can be sepd. easily by filtration.

0/1

FS CPI

FA AB

MC CPI: D06-H

L130 ANSWER 7 OF 8 WPIX (C) 2003 THOMSON DERWENT

AN 1986-043366 [07] WPIX

DNC C1986-018206

TI Prodn. of porous granular chitosan - by pptn. of low-molecular-wt. chitosan from acid soln. with base.

DC A11 A97 B04 D16 J04

IN KAWAMURA, Y; KURAHASHI, I; NAKAJIMA, S; SEO, H; TANIBE, H

PA (FUJN) FUJI SPINNING CO LTD

CYC 3

PI DE 3527482 A 19860206 (198607)* 42p

JP 61040337 A 19860226 (198615)

JP 61076504 A 19860419 (198622)

DE 3527482 C 19870723 (198729)

JP 63054285 B 19881027 (198847)

JP 01016420 B 19890324 (198916)

US 4833237 A 19890523 (198924)

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ADT DE 3527482 A DE 1985-3527482 19850731; JP 61040337 A JP 1984-198077 19840921; JP 61076504 A JP 1984-161192 19840731; US 4833237 A US 1987-11150 19870205

PRAI JP 1984-161192 19840731; JP 1984-198077 19840921

IC C07K017-10; C08B037-08; C08G018-64; C08J003-14; C08J009-28; C08L005-08; C12N011-02

AB DE 3527482 A UPAB: 19930922

Prodn. of porous granular chitosan is effected by dissolving low-molecular-wt. chitosan in an aq. acid soln. and pouring the soln. into a basic soln. to coagulate and ppt. the chitosan.

The starting chitosan has a molecular wt. of 10,000-230,000 and its solubility in the aq. acid soln. is 2-20 wt.%. The basic soln. comprises NaOH/H₂O, NaOH/EtOH/H₂O, ethylenediamine/EtOH, NH₃/H₂O or NH₃/EtOH/H₂O.

USE/ADVANTAGE - The prod. is useful as a chromatographic medium and

as a carrier for enzyme immobilisation. The process gives prods. with a uniform particle size and a uniformly fine pore structure without the need for additives (cf. JA 167048/80, 16532/81 and 57401/83).

0/0

FS CPI

FA AB

MC CPI: A10-E09; A11-B06D; A12-L04; A12-W11L; B04-C02E3; B12-M11D; D05-A01A1; D05-A01B; J01-D01A

ABEQ DE 3527482 C UPAB: 19930922

Prepn. of granular, porous chitosan comprises dissolving chitosan (mean Mr 10,000-230,000; 2-20 g) in aq. acid (100 g); pouring the soln. into an aq. alkali, NH₃ or ethylenediamine soln., opt. contg. EtOH; and the ptd. chitosan is opt. cross-linked with glucosamine (0.2-2.0 mol/mol) with an organic diisocyanate as cross-linking agent in a polar organic solvent.

USE/ADVANTAGE - The prod. is a chromatographic filler and a support for immobilised enzymes and other active substances.

ABEQ US 4833237 A UPAB: 19930922

Prodn. of granular porous chitosan comprises dissolving a chitosan of mean mol. wt. 10000-230000 in an amt. of 2-20 wt.% into aq. acidic soln. The obtd. intermediate soln. is poured into basic soln. to ppte. porous chitosan having specific surface area 15-98 m²/g.

The porous chitosan can be reacted with organic diisocyanate in an amt. of 0.2-2.0 moles per mole glucosamine residue of the chitosan in polar solvent to provide a prod. having a bed vol. recovery rate of 56-98%.

USE/ADVANTAGE - As a chromatography filler, enzyme carrier, etc. The chitosan has uniform fine pores throughout and uniform particles size. It recovers fine pores when re-immersed in the aq. system after drying treatment.

L130 ANSWER 8 OF 8 WPIX (C) 2003 THOMSON DERWENT

AN 1981-72788D [40] WPIX

TI Water soluble polymeric material prodn. - from brown algae, by crushing, and adding alkali and then acid, used as thickener in printing.

DC A11 G02

PA (KIMI-N) KIMITSU KAGAKU KENKYUSHO

CYC 1

PI JP 56104902 A 19810821 (198140)* 3p <--

PRAI JP 1980-7959 19800126

IC C08B037-04

AB JP 56104902 A UPAB: 19930915

Prodn. comprises crushing brown algae to at least 100 mesh, dissolving the crushed algae in alkali (pH at least 9), adding acid to the soln. to deposit alginic acid or adding salt of at least bivalent metal except Mg to the soln. to ppte water-insoluble metal alginate and produce cpd. consisting of alkali alginate mainly from the ppte.

The alkali alginate prod. is produced without filtration.

In an example Durvillen Potartum was crushed to at least 100 mesh. To 10 kg 2001 of water and 2 kg of soda ash were added and stirred at 60 deg.C for 2 hrs. 15l of 2N H₂SO₄ was added to the soln. The obtd. alginic acid gel contg. cuticle and fibrin was dehydrated, neutralised with 50% NaOH in MeOH and dried to obtain 6.1 kg of prod.

FS CPI

FA AB

MC CPI: A03-A; A10-A; G02-A04A; G05-F

=> d all abeq tech abex

L133 ANSWER 1 OF 1 WPIX (C) 2003 THOMSON DERWENT

AN 1989-117701 [16] WPIX

DNC C1989-052060

TI Water soluble chitosan salt used for packing cosmetics, etc. - prep'd. by

neutralising acidic aq. soln. of chitosan with carbonate.
 DC A11 D13 D21 F09
 PA (NIUS) NIPPON SUISAN KAISHA LTD
 CYC 1
 PI JP 01062302 A 19890308 (198916)* 3p
 JP 02032281 B 19900719 (199033)
 ADT JP 01062302 A JP 1987-218312 19870901; JP 02032281 B JP 1987-218312
 19870901
 PRAI JP 1987-218312 19870901
 IC C08B037-08
 AB JP 01062302 A UPAB: 19930923
 Chitosan salt, which is water soluble at pH 6-8 is prep'd. by neutralising
 an acidic aq. soln. of chitosan with carbonate.
 Specifically, the acidic aq. soln. of chitosan is obtd. by adding
 organic salt (e.g. formic acid, acetic acid, lactic acid, sulphamic acid,
 etc., or inorganic acid hydrochloric acid, nitric acid, etc., to chitosan
 and dissolving the mixt. in water. The carbonate used is ammonium
 (bi)carbonate, Na (bi)carboante, K, (b)carbonate, Ca carbonate, etc. The
 neutralised aq. soln. is dried by freezing to form powder, which is
 dissolved in water before use.
 USE/ADVANTAGE - The chitosan salt can be added as a thickener and
 bacteriastatic agent for the prepn. of a frying mixt., as a thickener and
 humidifier of packing agent in cosmetics and as a gloss agent and
 reinforcing agent for paper, because it does not coagulate protein.
 0/0
 FS CPI
 FA AB
 MC CPI: A10-E; A10-E09; A12-P; A12-V04; D08-B01; F05-A06C

=> d his

(FILE 'HOME' ENTERED AT 09:55:19 ON 03 FEB 2003)
 SET COST OFF

FILE 'REGISTRY' ENTERED AT 09:56:08 ON 03 FEB 2003
 E CHITOSAN/CN

L1 1 S E3

FILE 'HCAPLUS' ENTERED AT 09:57:12 ON 03 FEB 2003
 L2 10895 S L1
 L3 13648 S CHITOSAN
 L4 13758 S L2,L3
 E HEILEMANN A/AU
 L5 12 S E4,E5
 E HOLZER J/AU
 L6 58 S E3-E5,E9-E11
 E SANDER A/AU
 L7 135 S E3-E7,E15
 E SCHAEFER G/AU
 L8 233 S E3-E12,E36
 E COGNIS/PA,CS
 L9 800 S E3-E112
 E SCHAFER G/AU
 L10 100 S E3-E7,E21
 L11 2 S L4 AND L5-L8,L10
 L12 1 S L9 AND L11
 L13 2 S L11,L12
 E CROSSLINK/CT
 L14 48186 S E15
 E E15+ALL
 L15 244 S L4 AND L14
 L16 1605 S L4 AND (?CROSSLINK? OR ?CROSS LINK?)

L17 2 S L13 AND L14-L16
 L18 54 S L9 AND L4
 L19 3 S L18 AND L14-L16
 L20 2 S L19 NOT PVP
 L21 3 S L17, L20
 L22 1605 S L15, L16
 L23 23 S L22 AND (NONCROSSLINK? OR NONCROSS LINK? OR NON() (CROSSLINK?
 L24 45 S L22 AND FREE(S) (?CROSSLINK? OR ?CROSS LINK?)
 L25 65 S L23, L24

FILE 'REGISTRY' ENTERED AT 11:23:16 ON 03 FEB 2003
 L26 1 S 7664-41-7
 L27 1 S 144-55-8
 L28 6 S 463-79-6/CRN AND NA/ELS AND 2/NC NOT ((MXS OR MNS OR IDS)/CI

FILE 'HCAPLUS' ENTERED AT 11:25:03 ON 03 FEB 2003
 L29 108913 S L26
 L30 328540 S AMMONIA OR NH3
 L31 44376 S L27 OR L28
 L32 89950 S (NA OR SODIUM OR MONOSODIUM) () (CARBONATE OR HYDROGEN CARBONAT
 L33 34 S L22 AND L29-L32
 E ALKALI METAL/CT
 E ALKALI METAL HYDROXIDE/CT
 E E4+ALL
 L34 85739 S E10, E9+NT
 E ALKALINE EARTH/CT
 E ALKALINE EARTH METAL/CT
 E ALKALINE EARTH HYDROXIDE/CT
 E E4+ALL
 L35 46877 S E9+NT
 E E8+ALL
 L36 3557 S E5, E4
 L37 502019 S CSOH OR LIOH OR KOH OR NAOH OR BAOH OR CAOH OR MGOH OR SROH O
 L38 125564 S (CESIUM OR LITHIUM OR POTASSIUM OR SODIUM OR BARIUM OR CALCIU
 L39 135 S L22 AND L34-L38
 L40 161 S L33, L39
 E BAESCT
 E BAES/CT
 E BASES/CT
 L41 4 S L22 AND E3-E7, E13-E24
 E E3+ALL
 L42 4 S L22 AND E2, E1+NT
 E CARBONATES/CT
 L43 5 S L22 AND E3-E22
 E E3+ALL
 L44 41 S L22 AND E4+NT
 E PHOSPHATES/CT
 L45 11 S L22 AND E3-E45
 E E3+ALL
 L46 72 S L22 AND E4+NT
 L47 224 S L40-L46
 L48 8 S L47 AND L25
 L49 57 S L25 NOT L48
 L50 45 S L49 AND (PD<=20000701 OR PRD<=20000701 OR AD<=20000701)
 L51 16 S L50 AND CARBOHYDRAT?/SC, SX, CW
 L52 29 S L50 NOT L51
 L53 16 S L52 AND CHITOSAN/TI
 SEL DN AN 5 8 12 13 15
 L54 5 S L53 AND E1-E15
 SEL L48 DN AN 4 5 8
 L55 5 S L48 NOT E16-E24
 L56 10 S L54, L55
 L57 13 S L52. NOT L53-L56

SEL DN AN 3 10
 L58 2 S E24-E30 AND L57
 L59 12 S L56, L58
 L60 12 S L49 NOT L50-L59
 L61 847 S L11 (L) TEM/RL
 L62 130 S L61 AND L22
 L63 4 S L61 AND L25
 L64 3 S L63 NOT MECHANICAL/TI
 L65 16 S L59, L64, L21 AND L2-L25, L29-L64
 L66 53 S L22 AND FREEZ?(L) (DRY OR DRIED OR DRIES OR DRYING)
 L67 14 S L66 AND L47
 L68 4 S L66 AND L25
 L69 2 S L67, L68 AND L65
 L70 15 S L67, L68 NOT L69
 L71 16 S L65, L69
 L72 249 S L22 AND (DRYING OR DRY OR DRIED OR DRIES)
 L73 54 S L72 AND (FROZ? OR FREEZ?)
 L74 1 S L73 NOT L66-L71
 L75 98 S L22 AND WITHOUT
 L76 63 S L75 AND CHITOSAN/TI
 L77 35 S L75 NOT L76
 SEL DN AN 15
 L78 1 S L77 AND E31-E33
 L79 17 S L71, L78 AND L2-L25, L29-L78

FILE 'HCAPLUS' ENTERED AT 12:06:16 ON 03 FEB 2003

FILE 'WPIX' ENTERED AT 12:06:56 ON 03 FEB 2003
 L80 4655 S CHITOSAN
 L81 2527 S R03882/DCN, PLE
 L82 1696 S (C08B037-08 OR C08L005-08 OR A61K031-722 OR A23L001-056) /IC, I
 L83 1514 S (B04-C02E3 OR C04-C02E3) /MC
 L84 4726 S L80/BIX
 L85 6214 S L80-L84
 L86 679 S L85 AND (?CROSSLINK? OR ?CROSS LINK?)/BIX
 L87 12 S L85 AND B5027/PLE
 L88 9 S L86 AND L87
 L89 12 S L87, L88
 SEL DN AN 4 9 10
 L90 3 S L89 AND E34-E40
 E HEILEMANN A/AU
 L91 8 S E3
 E HOLZER J/AU
 L92 38 S E3, E4
 E SANDER A/AU
 L93 63 S E3-E5
 E SCHAEFER G/AU
 L94 193 S E3-E11
 E SCHAFER G/AU
 L95 108 S E3-E7
 L96 3 S L85 AND L91-L95
 L97 3 S L96 AND L86-L89
 E COGNIS/PA
 L98 987 S E3-E19
 E COGN/PACO
 L99 1322 S E3-E5
 L100 85 S L98, L99 AND L85
 L101 5 S L100 AND L86-L89
 L102 6 S L97, L101
 SEL DN AN 2 3
 SEL DN AN 3 4
 L103 2 S E5-E8
 L104 5 S L90, L103 AND L80-L103

E R07813+ALL/DCN
L105 667 S E1
L106 6216 S L105,L85
L107 2 S L106 NOT L85
L108 13 S L106 AND (NONCROSSLINK? OR NON CROSSLINK? OR NON CROSS LINK?)
L109 42 S L106 AND (?CROSSLINK? OR ?CROSS LINK?) (S)FREE
L110 52 S L108,L109
L111 4 S L110 AND L104
L112 5 S L104,L111
L113 42 S L110 NOT L89,L101-L104,L107,L112
SEL DN AN 15 31
L114 2 S L113 AND E1-E4
L115 7 S L112,L114 AND L80-L114

FILE 'WPIX' ENTERED AT 12:31:30 ON 03 FEB 2003
L116 9 S L108 NOT L115
SEL DN AN 2 6
L117 2 S E5-E8
L118 9 S L115,L117 AND L80-L114
L119 2 S L118 NOT L115
SEL PN L103

FILE 'DPCI' ENTERED AT 12:36:11 ON 03 FEB 2003
L120 2 S E9-E14

FILE 'DPCI' ENTERED AT 12:36:20 ON 03 FEB 2003

FILE 'WPIX' ENTERED AT 12:36:50 ON 03 FEB 2003
L121 4 S (DE3903707 OR WO9620015 OR JP1062302 OR JP63017901 OR JP63090
E DONGES /AU
L122 15 S E8
L123 1 S DE3903797/PN
E JP63017901/PN
L124 1 S E3
E DE2000-19836960/AP, PRN
E DE19836860/PN
E ZIMMERMANN U/AU
L125 89 S E3
L126 0 S L125 AND L106
E BEHRINGER M/AU
L127 1 S E3-E5 AND L125
L128 2 S (EP538904 OR JP56104902)/PN
L129 8 S L121,L123,L124,L127,L128
L130 8 S L129 NOT L115,L119
E 1989-117701/AN
L131 1 S E3
E 1988-061314/AN
L132 1 S E3
L133 1 S L131,L132 NOT L115,L119,L130